THE JOURNAL
OF THE
Michigan State Medical Society

ISSUED MONTHLY UNDER THE DIRECTION OF THE COUNCIL

VOL. 38 OCTOBER, 1939 No. 10

ROCK SLEYSTER

WHAT PRICE DEPRESSION?*

ROCK SLEYSTER, M.D.
WAUWATOSA, WISCONSIN

As a preface, I wish to make clear that nothing I am about to say, is to be construed as in any way a political argument, a sermon, or a mere cynical outburst of rebellion at changing conditions. It is an attempt to evaluate the effect of certain influences on the individual and mass thinking of today.

The future of mankind will depend, as it has in the past, on the thinking and mental health of the people. Mass thinking is but the collected thinking of the individual. By "mental health" in this consideration, I broaden the term to mean a thinking which adjusts the individual, and collectively the people, to conditions in such a manner as to in the end promote progress, security, morals, health, happiness, independence, and self expression. I include under "mental health" the possession of those attributes on which the advancement of civilization has so largely depended—such qualities as character, honesty, ideals, morals, industry, unselfishness, and good citizenship. These attributes have indicated mental health and have determined conduct. Deviation from them in individual or mass thinking has always resulted in a halt in progress and usually in regression.

If we as physicians are concerned with something more than the individual's structure and the functioning of his parts, if we believe we owe something beyond repair to the structure when damaged or correction of function when at fault, then we must assume some responsibility for the way man individually and collectively functions in his adjustments to life. We must realize a responsibility to mental as well as to physical health, and this responsibility should be assumed by all branches of medicine and not by psychiatry alone.

We are all frankly anxious about the future of our own country and of the world. The prevalent spirit of hatred and aggression, the preparations for war, the loss of liberty and independence, the colossal debts contracted for future generations to pay, are cause for grave concern. As a physician, however, I am more concerned with man himself who is subject to these conditions than I am with the conditions per se. Assuming a responsibility as physicians for man, are we aware of what is happening to him? Are we exercising a vision our special training should have given us? Are we raising our voices in protest at conditions which are affecting his thinking and his moral fiber?

We face a troubled world—a world in which the old ideals and objectives have been strangely altered. In their place have been substituted new teachings and philosophies which lead to the regimentation of man at any cost. These are days which call for clear thinking by those trained to interpret what is happening and why. Certainly one approach—possibly *the* approach to an

*This is the annual Andrew P. Biddle oration delivered before the 74th annual meeting of the Michigan State Medical Society, Grand Rapids, by the president of the American Medical Association.

answer—will be found in a study of these conditions and influences as they affect the thinking of the individual.

From a medical standpoint, we must look forward into the future and try to understand what is happening to those who will come to us for help and guidance. I am frankly concerned over future as well as present problems resulting from the depression years, especially as they relate to the developing age group. Here is a group maturing under influences, under difficulties we did not have to cope with in establishing a place for ourselves. Here is a group reacting not only to the normal feelings of resentment and discouragement at obstacles more difficult than their elders were forced to overcome, but influenced emotionally by a propaganda deliberately set to shape the thinking of the individual toward certain ends, and to make him unfit to work out his problems by developing his own resources. Suggestable to present day attitudes toward fundamentals, to deliberate propaganda favoring dependency, to collective rather than individual responsibility for security—what will be the price to be paid in mental health? To the present burden of the mentally handicapped, what added load may be expected from the discouragement, the frustration, and the effects of present day influences on the emotional and mental lives of this age group?

A moment's reference to today's problems causes concern. If influences at work add to it in a degree which seems likely, we shall indeed ask "What Price Depression?" for today patients with mental disease occupy 47 per cent of the hospital beds in this country, and for the country as a whole, the number of persons hospitalized for mental disease increased more than 40 per cent from 1926 to 1936.

It is impossible to draw a hard and fast line between mental health and mental illness—just as it is between physical health and physical illness. This is because there are varying degrees of mental health. Many people who would never be considered "mentally ill" as we use the term, are nevertheless definitely handicapped in the race of life by mental and emotional traits and states. These are not the institutional types just referred to as hospitalized. Rather are they the dependent, the unhappy, the unsuccessful, the offenders, and the chronically ill. All of these, bluntly stated, define the scope of our problem.

Time was, within the remembrance of each of you, when we who are here today were acquiring the mental and emotional equipment with which to cope with life and make our way in society. First of all, we were told of a world which had struggled through centuries of oppression and of our father's final escape to America—a land dedicated to the principle that government exists for its people, and not its people for government. It was a land of opportunity—a land where hard work, frugality, self improvement, and self denial would be rewarded. These rewards were a sacred right to those who earned them. It was a land of racial equality and religious liberty; and its people worshiped God in their own way, but they worshiped him. It was a land where word given was an obligation to be fulfilled whether by individual or government. It was a land where debt was to be shunned, and thrift encouraged. We were taught to live within our means, save for a rainy day, establish our own security, honor our obligations, respect the rights of others, provide for the deserving less fortunate by private giving, and to protect with all our resources this land of freedom and of opportunity.

The founders of the nation fought to establish the rights of life, liberty, and the pursuit of happiness, and framed a government which they believed safeguarded them for posterity. By its Declaration, its Constitution, and its Bill of Rights, the individual was believed protected against the domination of any autocratic power. It was believed that men freed from the exactions, the impositions, and the direction of government, could develop as individuals; work out their own destiny, and reach a plane never known before. This belief was justified. A people free of direction and paternalism became self reliant, and carved in a wilderness, a country with resources, health, happiness, and comforts never known before.

Today, we look at a world torn and disrupted by hatred, violence, and aggression. Philosophies of racial superiority, of class consciousness, and of political domination, sacrifice the individual and all he has worked for and held dear. Having fought through centuries for the opportunity of self devel-

opment and self expression, we find man sliding back into the position of a puppet of the state—dominated, mechanized, and regimented by political overlords. What has happened to his thinking? Why are these developments possible?

Since the world war, and especially since the onset of the depression, changes have taken place which we did not believe possible before that time. These changes are more easily understood abroad than at home, for the people of those countries have never enjoyed our standards of living, and have in the past few years been subjected to hardships we have not known. Of one thing, however, we can be certain—only a leadership appealing to the emotions rather than reason could have brought about a surrender of personal liberty such as we have seen. Sane and balanced thinking would never have sanctioned it.

Similar trends in our own country are cause for grave concern, and the infiltration of foreign philosophies into the thinking of our own people is a challenge to those interested in the preservation, not only of our type of government, but of our type of American citizenry. We cannot deny that the past twenty years has seen a decline in morals, in honesty, in initiative, in industry, and in independence. We cannot deny a new pattern of thinking and behavior—a changing attitude toward fundamentals—a certain feeling of hopelessness, and a willingness to surrender to doctrines of fantastic promise.

The ending of the world war saw a "let down" in emotional tenseness. We had willingly sacrificed and submitted to denial and regimentation in a manner unknown of our generation—all for a great ideal. The world was to be made "safe for democracy." In the following ten years, a reaction was inevitable. To resort to the vernacular—"the lid was off." It was a period of "jazz" and "whoopee." Fortunes were made and lost almost over night. The whole tempo of life was speeded far beyond a normal limit. Abroad we saw a post war settlement unjust, and bound to lead to the developments of the past few years in Germany, Russia, and Italy. The Wilsonian doctrine we had fought for was thrown overboard. War debts and pledges we had considered sacred were repudiated. But what cared we? "On with the dance—let joy be unconfined." Prosperity was here—prosperity such as we had never known before! It was a mass hysteria. No one saved for a rainy day. The politician sang "Happy days are here again"! There was no propaganda for communistic or socialistic doctrines. No one looked to government for support or security. And then the crash—the inevitable reaction—the "cold gray dawn of the morning after." Confidence was replaced by panic, anger, and fear. Some one must be made to suffer—someone must be punished. The American mind was for the time being receptive to a new type of influence and certain forces were ready to take advantage of the situation.

Periods of want, of unemployment, of idleness through business stagnation, have ever been opportune times for the dishonest politician, the impractical theorist, the reformer, and the demagogue. They thrive on misfortune, for worry is productive of a state of mind receptive to philosophies and panaceas which would never get a hearing in normal times. With plans and ambitions frustrated, with actual want waiting on the doorstep, with fear and anger and envy as pent up emotions, it is easy and comforting to be told that someone else is to blame. When things go wrong, the first impulse is to evade personal responsibility, and to find a scapegoat. It is very easy, as a result of clever suggestion, to develop a persecution complex. Wishful thinking for a quick and easy way out, a short cut, an evasion of the obviously slow and painful way—makes us vulnerable to the theories and philosophies which are worthless and even dangerous by all the rules of appraisal we have used in the past. Emotion rules—not reason. At these times, the opportunist appears as he always has, and the evangelistic and impractical crusader works himself into a frenzy of emotional appeal. Too much idle time completes the set up for the "devils workshop," and the field is now ready for the propagandist, the visionary, and the charlatan doctor of economics.

During the world war, a new mechanism was set up for the purpose of influencing the thinking of the individual and the nation. It was so effective that it was immediately taken up for promotional purposes by government, politician, theorist, and reformer. I refer to "Propaganda." It has

been skillfully developed into an art, and is today, I believe, the greatest outstanding danger to our country and its people. The screen, the press, the radio, the lecture hall, and even the pulpit have been prostituted by this evil. Insidious in its emotional appeal, by the twisting of truth or the artful presentation of half-truths, it molds superficial thought into entirely fallacious opinions. Demands are thus created by organized minorities and false philosophies are promoted. During the past quarter century public opinion has been misled on more than one occasion by skillfully directed propaganda.

There has been no influence in moulding the character and minds of our people in the past that has equaled the influence of the home. All that is good and best has had its inception in a good home and the structure of our life has been built around it. Times have changed, however, and the old-fashioned home is becoming more and more rare. In a facetious mood, Fishbein has defined the home of today as a place in front of the garage to which the children return from the movies at midnight to await their elders' return from the bridge club. Too often it is a place where the modern mother feeds her brood with the aid of a can opener, turns them over to an inexperienced nurse maid, and hurries off to a cocktail party or dinner dance. I may be old fashioned, but I cannot help feeling that these youngsters are being cheated out of the most important factor in the development of mental health and poise, and that the greatest single need of America today is a return to the home life as we have known it in the past.

Contrast if you will the reading of today with that of the past. To begin with, the automobile, the motion picture, and the bridge game, have been so important in our lives that we have had little time to read. How many get farther than the newspaper, and even so, it too often must be the sensational type. Note the evaluation of news in its placement. A gangster's murder gets headlines on page number one—the death of a world benefactor, a quarter column on page six.

With the advent of Freudianism, the novelist of the day gloried in the realism with which he could picture sex. As a result, "Psychopathia Sexualis" was discussed freely in smart society, and the "modern" woman and man reveled in discussing their fixations and their complexes. The best sellers described situations and elaborated on morbid states in a language heretofore considered obscene. The dramatist was not slow to cash in, and an epidemic of plays depicting nature in the raw as interpreted by the new concept drew capacity houses for months. The unprepared quack took advantage, and neurotic individuals were eager to pay money to talk with the "professor" about their "sub-conscious." The mills of the divorce court were speeded up, round trip tickets to Reno were reduced, and the results were apparent in the morals court and wreckage of home life.

Look over, if you will, the display at any news stand, and then try to evaluate the effect of this popular reading on the mind of today. Your first impression is that of the seeming necessity of nudity on the covers in order to make sales. Note the emphasis on sex and crime. Ponder on the success of recent cheap pictorials and the positive rot they offer to satisfy a degenerating taste in reading. Turn now to three or four of the so-called "high brow" publications of the social sciences, and deny if you can their communistic propaganda. It is heartening to note, however, that in all this display of sordid, cheap, and vicious literature, there are a few left worth reading, and that a little magazine without advertising *(The Reader's Digest)* and the *Saturday Evening Post* (truly American) remain among the best seliers.

The influence of motion pictures on our mental life has grown rapidly in the last twenty years. To many it has brought a wholesome entertainment. To many it has been of distinct educational value. To some it has meant a momentary escape from an unhappy reality into a dreamland of phantasy. Its possibilities for good are great, but there are distinct dangers as well. It may be too easy an escape from responsibility and a detour to avoid a more constructive application of time. Its delineation of ease and luxury may bring envy and dissatisfaction with what we have. Much of the entertainment offered certainly can make no claim as art, much of it is cheap and vulgar, and much of it is downright vicious in its appeal. The title of a clean and well known story is changed when

screened without rhyme or reason, except to appeal to those looking for something risque. I quote two advertisements for pictures from a recent morning paper:

"Spicy as a show-girl's diary—
A tasty but torrid hit
Oomph girl of the green in her sizzling best."

Another

"Eyes—veiled with the languor of tropical nights—Lips—curved with the temptation of rapturous promise—exotic—desirous—an alluring beauty who fanned the spark of smouldering passion into fierce, flaming ecstasy."

This sort of thing dished up to your adolescent youngster! Have the movies an influence on mental life? Have we as physicians an interest in this sort of thing? Have the mothers and fathers of this great country the stamina to take a stand for decency and against some of the influences I have just covered? Personally, I was heartened when the picture, "Goodbye, Mr. Chips" drew capacity audiences in my home city for two weeks, while the "Alluring Beauty" lasted only one.

Probably no agency today is more effective in influencing the thinking of our people than the radio. It has much that is good—very good, and it has much that is bad—very, very bad. The same instrument that can bring the beauty of a symphony orchestra, can bring the pulsating tempo of a savage jungle jazz, proudly announced as "hot music." And make no mistake in minimizing the influence of music on the emotions! The instrument which brings you a stimulating scholarly lecture, brings you as well a cheap substitute for humor often bordering on vulgarity. The address of a statesman is followed by the impassioned harangue of a demagogue. Most dangerous of all is the propaganda for political effect—so sugar coated in its appeal to the emotions, that its intent and dangers are disguised, and there is no opportunity to unmask it. Because of its emotional appeal, its influence is often far reaching in its effect on individual and mass thinking. The great danger is that under the regulation of a political dictatorship the radio could easily swing the destiny of the nation.

During the depression era, we have seen orderly thinking disrupted by political catch phrases with only an emotional appeal. What think you of the use in America of such terms as "Torys"—"Special privilege"—"Entrenched greed"—"Economic Royalist"? Are they the appeal of the statesman to reason? Can anyone with love of all our country has held dear condone the use of such shibboleths in their effect on the mental health of a people in distress?

What of "Redistribution of wealth," "The haves and have-nots," "A car in every garage," "The under-privileged"? Are they constructive expressions at a time leadership should inspire courage, or do they tend to increase dissatisfaction, envy and hatred? What of "Every man a King"? Was this intended to inspire the utmost in the development of the individual or was it the cheap clap trap of the demagogue. Mind you, I am not talking politics, but I *am* interested and everyone of us *must* be interested in the effect of such appeal on the mind of man.

Foreign philosophies which have halted progress and all but wrecked the countries of their origin, have been so cleverly promulgated as to cause the gravest concern as to their effect on the thinking of our own people. In their appeal to basic human weakness, through promises of protection and relief of fear, they have made alarming headway. Of these none is more serious than those disturbing the individual's incentive to work for his own security. We would all welcome a Utopia in which some mysterious power would assume responsibility for our old age, our unemployment, and our periods of misfortune, and illness. We must face reality, however, and realize that we are living in no dream land; and that the beneficent power called "state" or "government" who is to father us, is none other than those of our neighbors who are industrious and through political compulsion are forced to support us. I am sure none of us has any quarrel with tax support of the indigent. I do protest, however, the utterly cruel and senseless campaign to undermine that quality of mind which has furnished the incentive more than any other for effort that has developed the individual and the nation.

The only real—the only dependable security—is the security that comes from resources within oneself. Any philosophy that promotes security at the expense of independence, that supplants self reliance with

the false contentment of dependency on others, destroys initiative and unfits the individual to compete in the race of life. It is a harking back to the infantile method of securing satisfaction expressed by the words—desire—cry—satisfaction. Life changes this with maturity to a sequence of desire—work—save—satisfaction. This formula is fundamental to progress and no political pandering or wet-nursing can change it without wrecking the objective for which it was intended. The doctrine that "the world *owes* us a living" is neither stimulating to the individual nor to the nation. What the world *owes* us can only be measured by the effort we are willing to make as *our* contribution to making it a better place in which to live.

Today, we face a troubled world. Perhaps never before has it been so under the influence of emotional control. Its unhappy maladjustments are cause and effect of mental and moral deviations from the standards evolved through experience. The mind of man is bewildered and confused. The teachings, the codes and the ethics on which he has depended to guide him in effecting his placement in relations to others are being attacked and destroyed.

He has been taught honesty and the sacredness of an obligation, only to see government, which he was taught to respect, repudiate debts, violate contractual obligations, and desert party platforms.

He has had a religious training which taught tolerance and the golden rule, only to see those in high places preach and foster class hatred, racial discrimination, and religious intolerance.

He has been taught to work hard, to save, to live within his means, and to acquire for his own competence. He cannot reconcile this with the spectacle of government extravagance and spending beyond income nor with the piling up of debts for future generations to pay. He cannot square this training with a philosophy of more pay for less work; not with the intervention of a third party to tell him if he may work, when he may work, where he may work, and how he may work. He cannot justify, with his training, a theory that he has a right to the property of others, or that they have a right to his—no matter how indirect the way of redistribution. To him such a theory is plainly dishonest.

Reared with a belief in Deity, and the acceptance of a standard of ethics by the great teacher of Galilee, he finds himself in a world drifting away from a faith which has gone hand in hand with all social progress, and he is deeply conscious he lacks a support he may not be able to define.

The mind of man is confused. The influences of the past few years have been too intricate to grasp and to evaluate in orderly fashion. Perhaps in the day of our fathers, when men fought the forces of man and nature, when men knew what they wanted, when men were accustomed to think for themselves, and to reason from available knowledge—perhaps these influences would not have been as effective as they are today. A breakdown of the sense of individual responsibility is a menace to the individual, to the nation, and to mankind. There is no greater threat to our country than a defeatist state of mind. If, in his search of security, man is willing to yield all he has struggled for through the centuries, the price will be far too great. If the influences of these years mean a breakdown in those qualities of mind which have brought the blessings of this century, and leave in their wake a lowered intellectual and moral integrity, we may well ask—"What Price Depression"?

With a full realization of the seriousness of the times, I cannot be altogether pessimistic about the future. The American type of mind has always settled down to efficient functioning after storms of emotional upheaval. It is time, however, for the profession and the public alike, to recognize the sinister influences at work, and to come out in the open in defense of a thinking that has made our Republic the envy of the world. It is a time to think clearly—to feel calmly. It is a time to face reality manfully, and avoid short cuts to Utopia. It is a time to preach tolerance, fairness, and charity. There can be no future without honesty and unity of purpose.

I, for one, cannot go along with a teaching which tells the discouraged that there is no future, that unemployment is here to stay, that "a changing social order" has closed the door to individual effort, initiative, and opportunity. I cannot condone a defeatist teaching that there are no more frontiers to conquer, that all the gold has been discovered, that all the virgin resources

are exhausted. Let us face the future. Opportunity was never found in the past—it was found in thinking our way through the days to come. Constructive effort today will not confuse the mind of man with a philosophy of defeatism, hatred, limited effort, and willingness to surrender to political control. Rather will it direct his attention to the opportunities of tomorrow, and the rewards for effort and hard work. The men who in this year 1939 are pioneering a Yankee Clipper in trans-oceanic service; the men who are developing air conditioning in home, office and factory; the men who are building a new super railway service; the men who are bringing into being a new world through chemical research—these men have no time to listen to a philosophy of less work and controlled effort—for they are busy dreaming, thinking, planning, doing. The future of the world will depend on the influence we can bring to bear on the mind of man—influences to combat all that has taken place in these depression years. Let us face a realistic future with faith and a firm determination that the mental, moral, and spiritual standards of the past shall be maintained!

IDEALS

H. A. LUCE, M.D.
President of the Michigan State Medical Society
DETROIT, MICHIGAN

Doctors of medicine are in assembly here this week at their annual meeting under the banners of the science of medicine. What is meant by the science of medicine? Who are doctors of medicine? What part do they play upon the stage of the world? Each individual with the degree of doctor of medicine is a person who primarily has completed a legally required amount of study and training in the science and art of medicine, a study and training in the methods known to defeat or limit the destructive forces which assail human life, health and happiness.

It is of interest to know that in the year 200 A. D., the Roman Emperor, Septimus Severus, first introduced a system of licensure for those who treated illnesses. Even as early as 370 A. D., a student of the healing art was required to furnish a birth certificate as well as a certificate of good conduct. In those early days medical knowledge and technic benefited only the wealthy class. No provision was made for the poor except through the generosity of the doctor. This idea appears to have originated then and has continued through the centuries to the present day.

Another factor has followed down through the ages and that is that humans prefer to obey mysterious instructions rather than the prescriptions and directions of physicians. This explains the ever present menace of cults and irregular practitioners. People do not use the same judgment about the care of their physical and mental health that they do of their automobiles and pet stock.

The life purpose of the doctor of medicine is to increase the sum of scientific knowledge and to transmit the benefits of that knowledge to the public. The science of medicine has ever been at war with mysticism and charlatanry. Today are added those groups who see in the distribution of medical care an opportunity to capitalize upon human misery for the purpose of political and selffish aggrandizement.

The chief capital investment of the medical profession is represented by the constantly accumulating wealth of knowledge stored in the minds, ideas, traditions and publications of its members, all of which is shared freely among all its members and with the public. This capital never has been monopolized for profit and does not fit into the capitalistic concept of economics. No one ever did nor ever will become an economic royalist out of the practice of medicine.

Service to humanity is the only reason for the existence of the medical profession.

Any incorrect distribution of this service is of itself in conflict with the objectives of the donors of the service. The maintenance

*President's Address to the General Assembly, Michigan State Medical Society, Grand Rapids, September 20, 1939.

and restoration of health and the postponement of death are the chief objectives.

There is not one kind of medical care for the socially and economically fortunate and another for those who stand at the other end of the line—the indigent and medically indigent. There is only one kind of care for everybody and that is the best care available in the locality in which the one in need resides. Food, clothing and shelter are subject to wider variations in quality without destructive action upon the recipients.

The public does not have a medical need which the medical profession is not keenly anxious to supply. The laboring man, the farmer and the doctor of medicine have interests much in common. The physician would be as pleased as any, had these fellow citizens of his enough annual income to provide adequately for their medical needs. That the laboring man is in a low income group is not the fault of the family doctor, but rather the responsibility of those who now offer him sap in the form of socialized medicine.

The very objectives of the doctor of medicine take his vocation out of the realms of a business enterprise, half-baked theorists and those who believe in a totalitarian state, to the contrary, notwithstanding. The practice of medicine is not a commercial pursuit. It is the one and only type of occupation that is continually striving to put itself out of existence. This seems unbelievable at first thought, but it is true. One has only to refer to history and learn of the human suffering and loss of life that followed in the paths of plague, malaria, typhoid, diptheria, smallpox, et cetera, all practically eliminated at present by the science of medicine. This battle to eliminate disease continues today and will continue unabated long into the future, unless the science of medicine is put under political and bureaucratic control.

We could exist very completely and possibly as happily without many of the so-called scientific advances in other fields.

Much of the improvement in the rapidity of transportation only enables the public to become involved in accidents more quickly. The improvement in lighting facilities enables us to enjoy better vision, but it also lengthens the hours of dissipation. The improvements in armament enables men to kill one another at longer distances.

A materialistic world has given undue credit to non-medical scientific achievements that have added little if any to human happiness. What would happen to the world today if the scientific advancement of medicine were suddenly set back a dozen centuries? It is fearful to contemplate. Misery, death and desolation would again run rampant and it is not improbable that all human life might be wiped from the face of the globe.

In a thousand places in this hectic world of ours today and every day independent individual workers are devoting their lives and efforts to defeat the destructive forces which war upon physical and mental health. They are not engaged in the development of new engines of destruction to be used in wars to destroy human life. They are not struggling to make one nation economically and territorially superior to another. They are not interested in class wars nor involved in titanic struggles to develop industrial supremacy and stifle consumption. They are bending every effort to enlarge and improve the scope of their usefulness. They are delving into the causes of illness and maladjustments. They are seeking new methods of attack upon insidious foes. They are allying themselves with other agencies which have similar objectives.

Down through the ages, the science of medicine has had only one objective, i.e., the extension of scientific knowledge and the availability of that knowledge through its distributors, doctors of medicine, into the field of public service.

In that group of twelve chosen by the Greatest Physician of all time, the man of Gallilee, there was a doctor of medicine. It is noteworthy that St. Luke was not the traitor—never in history has the science of medicine been a traitor to truth, nor has it sold its objectives for pieces of silver.

Of course, medical men are after all mere humans. We find some busy, some idle; some rich, some poor; some honorable, a few dishonorable. They are usually very tolerant, and, having to face the realities of life continuously, develop fairly well-adjusted personalities. Socially, as an escape from the ever-present traumatic episodes of their daily life, they are inclined to relax to an extreme degree from which they recover quickly.

The zeal to work with a high and noble objective in mind, the ever-conditioning of the personality by the environment, the training to face reality, the contact with hu-

man suffering and unhappiness have all contributed to the development in the distributors of medical care a type of character and a personality that in a confused and disoriented world is and has been unappreciated.

Never has organized medicine had any objective except that of relief of suffering and the prevention of illness.

The physician as a local member of society is a good citizen in all that the words imply. To almost a 100 per cent degree is he a law-abiding, tax-paying stable citizen. He usually forms an integral part of the group in any community that is interested in local economic and social improvements.

He is among the first that are thought of, if any civic enterprises are contemplated. He always buys the first church raffle ticket and makes the first donation towards "old home week." He has usually bought the "gold brick" stock or wild cat oil well shares in every community. Not that this is a contribution to society, but it helps to keep money in circulation at least.

To have been honored during this past year with the leadership of this group of medical men, as represented by the Michigan State Medical Society, is deeply appreciated by me. It means much more to me than mere organizational selection. It means a recognition of my love, nay even my veneration, for the science of medicine and of my admiration for these fellows of mine who labor with me.

To all those, again, let me express my appreciation of your kindness and consideration during my year as president. And, furthermore, may I express my wish for a continuation of the joy and happiness to you that comes from achievement in your chosen field.

At the close of your life's day, I would that I could be there to repeat the words of Daisy Thorne Gilbert, dedicated to "My Doctor":

"Kind angels, when you meet him there, let one
Bright wing droop helplessly, as if in need;
Or dim, if but a little while, the sun
Of your perfection; for his healing plead

And down the golden streets of those sweet lands
Point out some heavenly homes; and promise then
That some of these will seek restoring hands
And kindly cheer, as did the sons of men.

For if he cannot help and come at call,
It will not heaven be to this brave soul,
Whose life was spent a ministry to all
But self; love of humanity his dole

Let him believe, until he learns your way,
That need of him will bless each busy day."

POLIOMYELITIS

HAROLD B. ROTHBART, M.D.
DETROIT, MICHIGAN

Acute anterior poliomyelitis is an infection of the central nervous system, involving principally the motor cells of the spinal cord, that may result in paralysis. The paralysis is characteristically flaccid and asymmetrical.

The seriousness of poliomyelitis is greatly overemphasized. Much of the fear embedded in the mind of the public is unfounded and based on erroneous impressions gained from various sources, particularly the press. The medical profession is not entirely blameless, for by perpetuating the expression, "infantile paralysis," it has focused attention upon sequelæ which do not always develop. Infantile paralysis is a misnomer, for neither is it common in infancy, nor does it always lead to permanent paralysis. Indeed, many patients escape paralysis entirely. The term should therefore be discarded—it serves no useful purpose, and a healthier attitude towards poliomyelitis could be achieved through the dissemination of more accurate information.

Poliomyelitis is an infectious disease which is, however, not particularly contagious. Even during epidemics the case incidence is relatively low. In one of the largest epidemics in this country, that of New York City in 1916, there were only 1.59 cases per 1,000 population. Rarely do figures exceed a height of 3 per 1,000 even in rural sections, where acquired immunity is less prevalent than in urban centers. Such data demonstrate that the disease possesses a low degree of contagiousness and that a large proportion of the population is immune to it.

*Presented before the Wayne County Medical Society, Detroit, May 9, 1938.

As a rule, only one member of a family is afflicted, second cases rarely being found in the same household. The age distribution indicates that poliomyelitis is essentially a disease of childhood, the majority of the cases occurring in the first decade of life. Only 2 per cent are encountered in those over 15 years of age, and few are observed in infants under one year. In rural parts of the country, the incidence is higher in the older age group, 10 per cent being found in those over 15 years old. This is attributed to a lessened exposure to the disease in the early years of life, when repeated contact with subinfective doses stimulates the production of active immunity.

It is generally conceded that an ultramicroscopic virus, 8 to 50 mu in size, is the etiologic agent of poliomyelitis. Various attempts at isolating other microörganisms have been unsuccessful. Rosenau's claims that a pleomorphic streptococcus is the causative agent has not received general support or confirmation. The virus is present in the nasopharynx, tonsils, lymphoid tissue, olfactory nerve, and the central nervous system, especially the medulla, spinal cord, sympathetic chain or nerve tissue, and posterior root ganglia. It has never been recovered from the spinal fluid and occasionally from the blood and gastrointestinal tract. The infection is largely spread by patients and human carriers. Animals do not harbor the virus and all but the monkey are considered immune to the disease. Water and milk can conceivably serve as sources of infection. Hygienic conditions play an insignificant rôle. Poliomyelitis prevails chiefly in the summer months and early fall, but may appear at other times of the year.

The pathogenesis of poliomyelitis is not clearly understood and general agreement is lacking concerning the pathways by which the virus invades the central nervous system. The most accepted view considers the nasopharynx as the portal of entry. This was established experimentally in monkeys by nasal instillation of a cord emulsion from monkeys who died of the disease. Sectioning the olfactory nerves prevented the infection. This suggested that the virus did not reach the nervous system by way of the blood stream or lymphatic drainage but rather by passage through the olfactory nerve tract to the brain tissue and from there by direct continuity to the midbrain, pons, medulla, and spinal cord. Introducing the virus into the gastrointestinal tract has proved ineffective, and intravenous injection produces the disease only on condition that the olfactory tract be left intact or the brain be first traumatized. Recent reports from Yale investigators intimate that monkeys can be infected by subcutaneous injection of the virus, even with the olfactory nerves cut. Toomey has been able to produce poliomyelitis in monkeys by introducing the virus into the subserosa of the gut. He has demonstrated unmistakable pathology in the sympathetic nerves, posterior root ganglia, spinal cord, and brain. Thus, while the nasopharynx is the simplest and most plausible portal of entry, the other possible routes should be kept in mind. Whatever animal experimentation may prove or disprove, the pathogenesis of the disease in the human being is still shrouded in mystery, for experimentation here is not possible. Speculation must still exist as to how the virus gains entrance into the central nervous system, although most observers accept the nasopharyngeal route as the most likely portal of entry in man.

The virus has a marked affinity for the gray substance of the cord and to a lesser degree for that of the brain. The sparse inflammatory reaction in the white substance may be due to the high cholesterol content of the myelinated nerve tissue, which absorbs the virus, thereby lessening or completely abolishing its virulence. Pathological lesions are observed in the cerebral hemispheres, cerebellum, medulla, basal nuclei, and spinal cord. Most of the histopathology is confined to the gray matter of the anterior horns, especially in the cervical and lumbar enlargements of the cord. To a much lesser extent the posterior horns, posterior root ganglia, and motor tract share in the inflammatory reaction. Very little can be seen on gross inspection aside from edema and injection of the blood vessels. Microscopic studies reveal punctate hemorrhages, congestion, and perivascular infiltration with mononuclear cells. Some of the capillaries appear occluded and others collapsed as a result of the external pressure exerted by the congestion and the cellular infiltration. The neuron cells may show varying degrees of necrosis and dissolution resulting from the pressure effects of the edema, the nutritional disturbances

consequent to the diminished blood flow, and the toxic action of the virus itself. Scarring with neuroglial tissue and cavitation may subsequently follow where the infection has been severe and the affected parts of the brain and spinal cord become smaller than the unaffected areas. Atrophy of nerve trunks, tendons, muscle, and bone represents the end stage of the disease, growth is retarded, and the paralyzed extremity fails to develop normally. The lesions that are found outside of the central nervous system cannot be regarded as specific for poliomyelitis. Generalized hyperplasia of lymphoid tissue is commonly observed. Perivascular infiltration in the liver and cloudy swelling of the kidneys, which may initiate a clinical picture of nephrosis, are sometimes encountered. The olfactory nerve, surprisingly, does not always show alterations from the normal, despite the fact that the virus has been repeatedly demonstrated in it.

The clinical diagnosis of poliomyelitis is not infrequently difficult, taxing to the utmost one's knowledge of the diseases of the nervous system. After a variable incubation period, not definitely established in man but regarded as four to eighteen days, symptoms develop. These may direct attention immediately to the central nervous system, or, as less frequently happens, the symptomatology is vague and interpreted as a mild upper respiratory or gastro-intestinal infection.

For clarity the clinical course of poliomyelitis may be divided into four stages:

1. The systemic or prodromal stage.
2. The preparalytic stage.
3. The paralytic stage.
4. The postfebrile (postparalytic) stage.

Systemic Stage.—Interpretation of the systemic stage is difficult. Its symptoms are by no means different from those seen in an influenzal infection, and yet in approximately one out of ten such cases, preparalytic manifestations of poliomyelitis develop, either concurrently after several days of illness or within three to four days after the patient has seemingly made an uneventful recovery. The systemic disturbance may be indicative of central nervous system infection from the beginning, before the pathology has advanced far enough to excite a meningeal reaction. Brodie believes this to be the case, rather than that systemic invasion precedes localization of the infection in the nervous system.

Preparalytic Stage.—It is far more common for poliomyelitis to be ushered in abruptly with preparalytic manifestations. The patient looks quite sick but if he is a child, he is likely to display "less external evidence of that internal misery which the adult so readily conveys to the attendant."

Headache, vomiting, fever, drowsiness, hyperesthesia, and irritability are the cardinal symptoms; muscle tenderness, back and neck rigidity are the cardinal signs. The headache is severe, persistent, and localized to the frontal or occipital regions of the head. Vomiting is present in more than half of the cases. The temperature ranges from 101 to 103 degrees and is apt to be higher in the severer cases and in those with bulbar involvement or extensive encephalitis. The sensorium is usually clear, but there are frequent periods of somnolence from which the patient can be easily aroused. Stupor and coma, if present, point to extensive cerebral pathology. Irritability is almost always present, and the patient resists manipulation. Physical examination reveals neck rigidity which is not as marked as in purulent meningitis. Of more significance than nuchal spasm is stiffness of the back. A moderate rigidity of the back with but slight neck rigidity is more suggestive of poliomyelitis than any other infection of the nervous system. Kernig and Brudzinski signs are not constantly present. The deep reflexes are either normal or hyperactive, and ankle clonus or Babinski sign can sometimes be elicited. The superficial reflexes remain normal. Deep muscle tenderness of the extremities and back are quite characteristic of the disease, but may be absent or be so slight as to escape detection. The abdomen may be tender. Constipation is quite common but so is diarrhea. Not infrequently there is urinary retention and distention of the bladder. Sensory disturbances, except hyperesthesia, are never encountered, and their presence should definitely rule out poliomyelitis. Delirium and convulsions are rare, but twitchings and tremors of muscles are sometimes early symptoms. In many instances the preparalytic symptoms rapidly subside and the patient makes an uneventful recovery without any signs of paralysis.

Paralytic Stage.—The paralytic signs make their appearance usually on the second or third day of the preparalytic stage. However, they may develop suddenly within a few hours or be delayed for several days. They continue to progress as long as the temperature is elevated, but more frequently the maximum paralysis is reached within four to seven days. This paralysis is flaccid and distinctly asymmetrical. The deep reflexes are diminished or lost. Any group or groups of muscles may be affected, including the diaphragm, intercostals, and abdominal musculature. Whether the paralysis is complete or partial will depend on the extent of injury suffered by the motor cells. It is unusual to find an entire extremity completely paralyzed. If great care is taken some residual muscle function can be uncovered which will serve as a useful point in eliminating the possibility of a peripheral neuritis.

In bulbar poliomyelitis, the encephalitic symptoms are more pronounced and one or more of the cranial nerves may become involved, particularly the third, fourth, seventh, ninth, tenth, or twelfth. The ataxic form of poliomyelitis is exceedingly rare.

Occasionally paralysis develops without any premonitory signs. The child may appear well at night only to awaken in the morning with a definite weakness of one or more extremities.

Postparalytic Stage.—The acute phase of the illness, in favorable cases, subsides within a week or two, the temperature returns to normal, and the condition of the patient becomes stationary. Soon, however, improvement can be detected. Muscle function begins to return and continues uninterruptedly. Although most of the recovery takes place within several weeks, improvement may continue for as long as six months and sometimes even two years.

Spinal Fluid.—The spinal fluid in poliomyelitis does not present any specific properties that can in any manner be considered pathognomonic of the disease and yet many monographs and manuscripts on the subject tend to convey that impression. As will be pointed out later, there are a number of infections that can produce alterations in the spinal fluid similar to those in poliomyelitis.

Lumbar puncture is usually not done in the systemic stage of poliomyelitis mainly because the disease is not suspected. Should a tap be made one may on rare occasions find a pleocytosis. As a rule, no changes from the normal need be expected.

With the onset of preparalytic manifestations there are definite alterations in the spinal fluid, although it may be entirely normal. The fluid is usually under increased pressure, crystal clear or slightly turbid, the globulin is present in larger amount than normally, and the sugar content is normal or elevated. The average cell count is 150 to 200, but variations from 0 to 1,000 or more cells are not infrequent. At first the polynuclear neutrophiles predominate, but within a few days are outnumbered by the lymphocytes, the former decreasing to about 10 per cent of the total cell count. Smears and cultures do not yield any microörganisms. In the paralytic stage, the spinal fluid rapidly returns to normal. Against a diagnosis of poliomyelitis is a spinal fluid which is purulent or has a diminished quantity of sugar. Complete absence of polynuclear cells in the differential count seriously questions the diagnosis of poliomyelitis.

Infection of the nervous system that may be confused with poliomyelitis are tuberculous meningitis, syphilis, dural sinus thrombosis, serous meningitis (secondary to adjacent pathology, *e.g.,* osteomyelitis of bone, brain abscess), toxic meningismus, choriomeningitis, and the various encephalitides. The clinical picture in all these may be quite similar, including the appearance of the spinal fluid. However, marked diminution of the sugar content in the spinal fluid and a positive Levinson Test will quickly incriminate tuberculous meningitis; serological tests will eliminate syphilis; marked increase of red blood cells in the spinal fluid will favor the possibility of a dural sinus thrombosis. Serous meningitis is often puzzling, but some focus of infection to explain it can usually be discovered, as is also the case in toxic meningismus. In choriomeningitis the cells are *all* lymphocytes, a valuable differential point in arriving at a diagnosis. The encephalitides can frequently be mistaken for polio-encephalitis, especially if the latter is not accompanied by any lower motor neuron lesion of the cord.

The paralytic manifestations of poliomyelitis can be mistaken for various diseases or injuries of bones, muscles, and joints, as well as the vitamin-deficiency diseases—

scurvy, rickets, and pellagra. But these can be readily dismissed if they are kept in mind. In multiple neuritis sensory changes are common and the lesions are symmetrical. Postdiphtheritic paralysis can ape poliomyelitis in many respects, because the diphtheria toxin also injures the anterior horn cells. A history of sore throat and absence of signs of meningeal irritation should readily establish the correct diagnosis.

It is clearly seen that poliomyelitis is not a particularly easy infection to diagnose. It is impossible in the prodromal stage, unless a lumbar puncture is done for some other reason than the presenting symptoms and a pleocytosis of polynuclear and mononuclear cells is found. Many of these unquestionably never proceed further, and represent the abortive group of cases. In the preparalytic stage the diagnosis need not be very elusive if one finds muscle tenderness, unequal deep reflexes (hyperactive at first and later diminished or lost), and considerable back rigidity with mild neck stiffness. In some instances the clinical picture is very confusing and a definite diagnosis cannot be made with any assurance. Establishing the diagnosis of poliomyelitis in the paralytic stage should be quite a simple matter and need not be discussed any further.

The prognosis in poliomyelitis must be given with caution, for neither the extent of paralysis or degree of subsequent recovery can be predicted with any degree of accuracy. The mortality varies greatly with epidemics, being as high as 25 per cent in some and as low as 6 per cent in others. Residual weakness persists in 25 to 50 per cent of cases. Nonparalytic forms of the disease are common and a large number demonstrate a slight weakness that rapidly disappears. The spinal fluid is of no prognostic value, but it is generally recognized that the severer infections have higher cell counts. Respiratory paralysis, hoarseness and dysphagia, rapidly advancing extensive paralysis, and circulatory collapse are ominous signs. Bladder dysfunction is temporary. When death occurs it is usually due to respiratory failure, extensive encephalitis with circulatory collapse, or intercurrent pulmonary infection.

The control of poliomyelitis during epidemics is very difficult. Prevention of the disease by quarantine is ineffective. Many normal persons harbor the virus in the nasopharynx and act as carriers, spreading the infection to the susceptible group of the population. Because of this uncontrollable factor, attending theaters, concerts, and other public places should be strictly prohibited. This rule applies especially to children. There is no need for a mother to take her child downtown for shopping purposes or a tour of inspection when poliomyelitis is rampant. Schools should preferably be closed and public meetings discouraged. Only by applying such drastic measures can the spread be adequately controlled.

There is as yet no specific prophylactic measure that will give definite protection, active or passive, against poliomyelitis. Convalescent serum or immune horse serum may be of some value if given in large enough doses to an individual exposed to the disease. The intramuscular injection of 10 to 20 c.c. of serum is hardly sufficient. If the dose is to be gauged by the results obtained in monkeys, at least 2 c.c. of serum for every pound of body weight should be given as soon after exposure as possible. Such a large quantity would have to be administered intravenously. If serum is not available, whole blood may be used as a transfusion. There are some who believe that whole blood taken from convalescent cases or normal healthy adults, who live in the city, may even be better than convalescent serum. The nasal sprays so largely publicized have not lived up to expectations. In a large series of cases with adequate controls, studied during the recent Toronto epidemic, the incidence of poliomyelitis in those given the nasal sprays by expert rhinologists was not apppreciably less than in the group not receiving it. It has been recommended that immune serum be used intranasally, and this may be effective in neutralizing the virus at its supposed portal of entry. All these methods are aimed to produce a passive immunity which at most does not last longer than ten days.

Active immunity against the disease has been accomplished in monkeys with a fair degree of success by both Brodie and Kolmer, each one using his own respective vaccine. Although these vaccines have been used on several thousand children, the results obtained are indefinite and not conclusive. Furthermore, their usage is not wholly void of danger, a number of cases

of paralysis following their use having been reported, with a few deaths, although it seems that Brodie's vaccine has been relatively harmless. More work needs to be done before vaccine immunization for poliomyelitis can be universally recommended.

Opinions regarding therapy of the acute stage of poliomyelitis differ. Considerable controversy exists as to whether or not immune serum or blood transfusions are of any value. Theoretically, it would seem that once the virus becomes fixed to the nerve cells, no amount of serum can have any effect upon it. Reports from a number of good clinics on the relative value of serum in poliomyelitis add support to this theory. In other equally good clinics favorable results were obtained, especially when it was used in the early preparalytic stage in large doses. At Ann Arbor, during the 1931 epidemic, eighty cases of poliomyelitis were observed in the preparalytic stage at the University Hospital. All of these received blood transfusions as soon after admission as possible, along with hypertonic glucose solution intravenously. Some were also given convalescent serum intramuscularly. Not one patient in this group died. Only one developed paralysis, which subsequently cleared up. This evidence is not conclusively in favor of immunotherapy, for many recover completely without any serum treatment. Nonetheless, our own experience and those of others which have been equally encouraging have convinced us that blood transfusions or serums, if given early and in sufficiently large amounts, are definitely beneficial.

Daily intravenous injection of hypertonic solutions, especially sucrose, is recommended as long as the muscle pain persists. This will help to relieve the edema and congestion around the motor cells and thus hasten their recovery. Striking clinical improvement has been observed following the injection of 100 to 150 c.c. of 20 to 40 per cent solution of glucose (sucrose not being available at that time) with relief of muscle pain and almost spectacular return of muscle function.

Repeated lumbar punctures serve no particularly useful function. They may do much harm by increasing the intracerebral congestion, as a result of decreasing the extracerebral pressure through spinal-fluid drainage. It is well to remember that under no circumstances should medication or serum be given intrathecally.

Bulbar poliomyelitis requires special nursing care. The difficulty in swallowing necessitates feeding by gavage. By raising the foot of the bed and placing the patient in a prone position, the secretions from the nose and throat can drain out, preventing asphyxia or aspiration pneumonia. The pharynx must be kept clear at all times and tracheotomy may be necessary to lessen the danger of asphyxia from aspiration. Atropine is contraindicated, and morphine, because of its tendency to increase the intracranial pressure, is not recommended.

The Drinker respirator is reserved for those with respiratory paralysis who are markedly dyspneic and cyanotic. It is of little value in respiratory paralysis of central origin.

Special attention to the muscular system is of the utmost importance. Weakened or paralyzed muscles should be placed at physiological rest and physiotherapy instituted as soon as the deep tenderness subsides. The coöperation of a good orthopedist is indispensable if the best results are to be obtained. Those who remain paralyzed can be greatly helped by muscle transplantation and surgery of the sympathetic nervous system.

As concluding remarks, certain important points deserve special stress:

1. The seriousness of poliomyelitis is overemphasized. Infantile paralysis is a misnomer and should be discarded from medical terminology.

2. The incidence of the disease even in severe epidemics is quite low.

3. A large number of patients never develop paralysis and many others show considerable return of muscle power.

4. A diagnosis of poliomyelitis in the preparalytic stage can only be made after a careful evaluation of the clinical and laboratory findings and not on the examination of the spinal fluid alone.

5. Serum and vaccine therapy still hold hope for the future conquest of the disease.

A SURVEY OF SYPHILIS IN OAKLAND COUNTY FOR 1938

The Committee on Syphilis of the Oakland County Medical Society

HAROLD R. ROEHM, M.D., Chairman, C. H. BENNING, M.D., EVERETT BRADLEY, M.D., E. E. HAMMONDS, M.D., C. A. NEAFIE, M.D., and P. V. WAGLEY, M.D.

An industrial survey was made by collecting the available data on cases of syphilis found in routine blood tests on industrial workers in Oakland County in 1938. The incidence was 3.1 per cent in 11,737 individuals, indicating that our estimated incidence of 4 per cent in our report last year was 0.9 per cent too high. This correction has been made in the calculation of percentages in the comparative figures of this year's survey.

The Committee has conducted a general survey of syphilis in the County for 1938, and has obtained the following information. There are at present in Oakland County 130 doctors of medicine, 23 osteopathic healers and 18 chiropractors engaged in private practice. None of the chiropractors treats syphilis. Reports were received from all but one of the remainder or 99.23 per cent as against 97.5 per cent in 1937. The doctor of medicine failing to report is not a member of this Society. Of the 130 doctors of medicine, 91 or 69.23 per cent have one or more cases under treatment. Of the 23 osteopaths, 10 or 43.48 per cent have one or more cases under treatment. The total number of cases reported in this survey from all sources was 1,061. 16 cases are not under treatment. Of the 1,045 cases under treatment, 559 or 53.49+ per cent were being treated by governmental agencies, i.e., the Oakland County Board of Health, the Oakland County Tuberculosis Sanitorium, the Oakland County Infirmary, and the Pontiac State Hospital, and 46.51 per cent were being treated by their private physicians. Of the 1,061 persons having syphilis 19 also had gonorrhea. Only 6 early infections with primary lesions were reported. Of the entire number of patients 174 or 16.39+ per cent were negroes and 887 or 83.51 per cent were white. There were 457 or 43.08+ per cent females and 604 or 56.92— per cent males.

An analysis of the average number of treatments per patient from all sources is illuminating. Because of inadequate information given in the reports, we were able to use only 981 of the 1,061 cases. The average number of treatments for 1938 per patient from all sources was 18.3 per cent. The breakdown of the sources follows. Average number of treatments for 1938 per patient by osteopaths was 7.08 per cent; by governmental agencies 15.1 per cent; by doctors of medicine in private practice 23.3 per cent. The methods of treatment are reasonably satisfactory except that not enough arsenicals are being used. The average age of patients under treatment was approximately 35 years.

The classification of the 1,061 syphilitics was as follows:

Prenatal	5	0.47+%
Early	185	17.44+%
Latent	607	57.21+%
Late	209	19.69+%
Congenital	55	5.18+%
	1,061	99.99 %

The method of classification of these cases was exactly similar to that of last year and the method of survey was duplicated. Each report was given over the physician's signature. Under these circumstances, we believe that reasonably accurate conclusions may be drawn from a comparison of like statistics for the two years.

From information acquired we believe that an estimated population of 200,000 is more nearly correct for Oakland County than the figure of 250,000 used in the survey last year. We have used the corrected figure this year, and in the comparative table to follow the statistics of last year have been corrected according to this figure as has the incidence of syphilis as previously mentioned. With a population of 200,000 and an incidence of 3.1 per cent the expected number of syphilitics in the County would be 6,200. We know of 1,061 or 17.09 per cent of the expected number.

A comparative table of 1937 and 1938 follows:

	1937	*1938*
Number of cases of syphilis	722	1,061
Distribution		
Percentage of whites	84.91%	83.51%
Percentage of negroes	15.09%	16.39%
Percentage not under treatment	2.90%	1.55%
Treatment by Governmental agencies	46.12%	53.49%
Treatment by private physicians	53.88%	46.51%
Percentage of M.Ds. treating syphilis	64.88%	69.23%
Percentage of osteopaths treating syphilis	23.80%	43.47%
Classification of cases		
Prenatal	2.22%	0.47%
Early	19.14%	17.44+%
Latent	51.11%	57.21+%
Late	28.86%	19.69+%
Congenital	3.74%	5.18+%
Percentage of reported cases in relation to expected incidence	11.62%	17.09 %

Conclusions

1. The number of cases of syphilis reported in the survey has increased in 1938 compared with 1937. We believe this is due to the growing practice of taking blood tests of employees by industrial corporations.

2. The percentage of distribution of the cases among white and negroes is in such close accord for 1937 and 1938 that we feel this offers a good check on the figures of the survey, since there has been no marked racial shift in the past year. We believe the comparative percentages in the tables of classification of syphilis for the two years also agree closely enough to indicate that this method of gathering data has value.

3. The percentage of cases of syphilis known but not under treatment has dropped 50 per cent since 1937 which indicates to us that educational publicity has reduced delinquency, although this remains one of the greatest problems of public health.

4. There has been a marked shift in the treatment of syphilis away from the private practitioners and toward the free governmental agencies. Treatment by such agencies increased in 1938 over 1937 by 7.37 per cent and the private physicians treated just that fewer cases. This trend away from the private physician is due we feel to the lack of interest of the doctors of medicine shown in their unwillingness to assume the responsibility for the treatment of indigent syphilitics. Most important is the necessity for the physician to keep his fees within the limits of the ability of the patient to pay.

5. One encouraging factor is found in the fact that 4 per cent more doctors of medicine treated syphilis in 1938 as compared with 1937, although each physician treated on the average fewer patients.

6. It is of interest to note that 19.67 per cent more osteopaths or almost double the number in 1937 were treating syphilis in 1938, but the treatments were the least adequate of any group.

7. The same situation persists in 1938 as in 1937, in that the number of cases of prenatal syphilis or syphilis in pregnant women is ridiculously low, but it is expected that this condition will be corrected by the new law which requires a blood test for syphilis on all pregnant women.

8. It should be noted that only one case of extragenital primary lesion was reported. Since extragenital lesions are usually quite common, this suggests that some are being missed.

9. The Committee feels that the surveys carried out have been of distinct value in demonstrating the inadequacy of our present case finding methods as shown by the average age of patients under treatment, the number of late and latent cases, and by the fact that only 17.09 per cent of the expected number of cases are under treatment. It calls to the attention of the physicians of the county the fact that a high percentage of the syphilitics in the county may be escaping either diagnosis or treatment or both.

10. The statistics show that the number of treatments per patient by the Doctor of Medicine in private practice exceed those of the next nearest group by almost 65 per cent. The patients of these physicians are thus receiving more adequate care. The reasons for this are partly due to the better class of patient with whom there is more coöperation and less delinquency, but the Committee believes that another reason is that the best treatment agency is the Doctor of Medicine in private practice. It must be recorded, however, that treatment can be improved in all groups.

11. The necessity for case finding, adequate treatment, and follow up still exists.

Recommendations

1. We recommend that a survey of syphilis in Oakland County such as has been made be repeated from time to time in order to check the effects of such programs as may be developed in the future by private or public health agencies.

2. We recommend to the Board of Supervisors of Oakland County that they pay the salary of a full time worker to follow up syphilitics delinquent in their treatment. We feel that it would be helpful to have a printed delinquent form which would be used by the physician, either private or of a governmental agency, to advise such a worker of delinquents.

3. We feel that a great effort should be made on the part of the County Medical Society to interest a group of 5 to 10 members in the problem of the treatment of indigent syphilitics. Such a group might take over or work with the established free agencies now treating syphilitics, with benefit to both the patient and the physician.

4. There is a need for a continued program of properly directed publicity in regard to the diagnosis and treatment of syphilis, but this should not be started until the physicians are ready to assume the responsibility of treating every individual who responds to such publicity.

5. We recommend that an adequate treatment set up for indigents be established through the medium of the private physicians of the county on a reasonable fee basis.

6. The necessity for a blood test for syphilis as part of the examination of every patient still needs emphasizing. We urge all governmental agencies, since they now play the rôle of the greatest employers of labor, to have routine tests for syphilis done on all employees of the P.W.A., W.P.A., et cetera, and on all persons obtaining any form of relief.

OUR CHANGING MEDICAL SERVICE*

A. H. MILLER, M.D.
GLADSTONE, MICHIGAN

"Our Changing Medical Service" is more than the title of my short talk today. It may well be the autobiography of every doctor of medicine in this room, every physician in the Upper Peninsula, every practitioner in the land.

Time does not permit nor would I dare to reminisce before this audience of young men, but I like to recall the rugged, independent type of medical practice we older men experienced when we first started our rounds with the old grey mare, and to reflect on the toilsome but ever-satisfying service which characterized our free action, up to just a few long years ago. This was in the days before "rugged individualism" came under the ban of the "pied piper of the air, fatuously fluting in ragtime." Now our very status as health defenders of the hearth and home is being challenged by those, who, having no knowledge of our art, presume to a wisdom beyond that of men who are giving their lives in full time devotion to the halt, the lame and the blind.

Of course, all of us realize that the science of medicine has progressed very rapidly in these ten or fifteen years or more; that the technics of medical service have changed mightily, and we are glad of these improvements and the way in which our Michigan physicians have kept in the van of progress. But, do all of us apprehend clearly the changes in the practice of medicine, in the distribution of medical service to the people, these changes that are in operation now, and the revolutionary alterations and substitutions for medicine which are being loudly recommended and vigorously lobbied, in and out of the national capitol?

Before 1929, that sad year of inverse fortunes, the medical profession performed its priestly service to the poor, out of the largess of its bounty. The State was delighted to throw its burdens of medical service on the willing physicians. After that great financial squeeze play, the poor became so great in multitude and the multitude of phy-

*President's Address presented at the annual meeting of the Upper Peninsula Medical Society, Escanaba, Michigan, August 23, 1939.

sicians became so poor, that the State was forced, reluctantly to be sure, to take over in part its responsibility of furnishing indigents with necessary medical care. To many physicians this represented the first great change in medical service, as they had overlooked, because it did not affect their private practices too closely, the socialization of medicine in the State care of the insane, the tuberculous and the crippled and afflicted children.

That the care of the indigent was and is shamefully inadequate is a fact so obvious that every newspaper in our State has been filled with protests against the drastic cut in the appropriation for the care of the crippled and afflicted children, and against the woefully insufficient monies to buy the necessities in food, clothing, shelter, fuel and medical care for those on Michigan's welfare rolls. Our own experience shows that Government, yes that very same Government which boasted, "We planned it that way," has been remarkably penurious in providing medical care for those on the WPA rolls, or the blind or dependent children, or the decrepit recipients of old age assistance, who above all others, require generous amounts of medical service.

In the face of this deplorable situation, it is most startling and incongruous to read the plans of the various handsome young men in Washington, who are endeavoring to make their name and fame by concentrating their efforts on putting over a great new national health program, including public health work, hospital building and health insurance! "Absurd," you say? Not at all! These modern glamor-boys are deadly serious in their emulation of Bismarck and Lloyd George, and therefore the whole scheme is dangerous—perilous to the health of the people and to the thread of Democracy in our land. The plan of socialized medicine known as Senator Wagner's National Health Program has not its roots in the democratic principles which have made this country great. The answer to the nation's health needs does not lie in a Fascistic philosophy which, like poison gas, spreads and injures and kills all and everything in its ever-widening path.

Ambition should not be fed on the health of our people. Further, Government must assume its rightful responsibility for the care of those on the welfare rolls but there must be a line beyond which Government must not step without usurping personal responsibility.

Government's first problem in medical service is to provide adequate care to those on relief. Let it take care of our indigents and do a good job at that before it looks about for other worlds to conquer. Let it realize that the burden of civilization can never be made too great or civilization will decay.

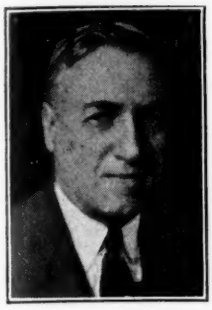
Government's second consideration is to permit the medical profession freedom to till its own field. Medical problems will be best solved by medical practitioners, not by ambitious, if well informed politicians who never circumcized a young man nor catheterized an old one. The medical problems of the great border line group and of the middle class are not unknown to the profession. The Michigan State Medical Society and its far-sighted leaders long ago instituted the movement which today has developed into the Volunteer Medical Service plan, which I hope will be approved by our House of Delegates next month in Grand Rapids, so that contracts for group health service may be offered to the public before the winter's snows.

Our changing medical service can and must be changed only by the doctor himself, through his medical society, and not through Government intervention. Our patients want humanitarianism from their doctors, not red tape. We practitioners want independence, even though it means greater toil. We want to be free from bureaucratic control and dictation in order that we may continue to go our untrammeled way in adding our mite to the beneficient influence which our profession has ever contributed to the upward progress of humanity, in allaying the ills to which mankind is heir. With the would-be law makers visibly and noisily flirting with chicanery, modern medicine will take that too in its stride, because the ancient Biblical adage is as new as tomorrow, "By their fruits ye shall know them."

The final decision rests with our patients. We fear not the verdict.

CARBON MONOXIDE POISONING*

WM. D. McNALLY, A.B., M.D.
Department of Medicine, Rush Medical College
CHICAGO, ILLINOIS



WM. D. McNALLY

Carbon monoxide is a modern poison with an historical record dating back twenty-five centuries. With the kindling of the first fire man came in contact with this, the most subtle of poisons. The cave man in using smoke to destroy his enemies unknowingly made use of this powerful poison. Aristotle, nearly 300 years B. C., observed that "men suffer from heaviness of the head and often die from coal gas." Hannibal (247-183 B. C.) put the inhabitants of Nuceria to death by carbon monoxide (coal vapor). Since that time many accidental deaths, suicides, and murders have been caused by this gas. With the more extended use of natural gas and electricity as sources of light and heat, deaths by this poison have gradually decreased. Deaths due to inhalation of the exhaust gases of internal combustion engines (principally automobiles) have been on the increase. In 1928 in Cook County, Illinois, I found sixty-three deaths due to auto gas, in a six-year period.[22] While in 1935 there were seventy-four deaths due to carbon monoxide, of which forty-six were due to auto gas; in 1937, thirty-nine out of sixty-three deaths were due to auto gas, and in 1938 of fifty-four deaths, twenty-two were due to auto gas.

This gas is not readily detectable by sense of smell or taste, because when pure it is tasteless, odorless, colorless, nearly insoluble in water. Since carbon monoxide is usually found mixed with other gases which are recognized by sight or smell, its probable occurrence is indicated when these gases are detected.

The density compared to air is 0.967. It can be compressed into a liquid and a solid. It burns with a blue flame, two volumes of carbon monoxide uniting with one volume of oxygen to form two volumes of carbon dioxide.

Carbon monoxide is produced by the incomplete combustion of organic matter. It is produced during welding processes, at the electrodes, or from the charges of electric furnaces. In electric furnaces having limestone linings the carbon dioxide is reduced to carbon monoxide at the heated electrodes. The most common sources of carbon monoxide, with the exception of its marked formation during a severe lightning storm, are stoves, grates, salamanders, domestic and industrial furnaces, distillation of oil, gas engines, fumes from explosions, burning x-ray films, smouldering ashes, and mine, coal, and artificial gases. It is formed whenever incomplete combustion of carbon occurs, such as flames on besooted surfaces and low burning oil lamps. The smoke of cigarettes, cigars and pipes contains this poisonous gas.

Enormous quantities of carbon monoxide are produced daily in the manufacture of illuminating gas, producer gas and water gas. In the city of Chicago during 1938 there were about 3,700 miles of pipe used for the transportation of over 200,000,000 cubic feet of gas per day, having the average composition of 2.5 to 3 per cent carbon monoxide. The proportion of carbon monoxide differs greatly in domestic and industrial gases, varying between 4 per cent and 30 per cent. In coal gas there is from 4 per cent to 10 per cent; in water gas 30 per cent; and from 20 per cent to 30 per cent in producer gas. The exhaust of an automobile may have from 1.5 per cent to 6.5 per cent of carbon monoxide.

Natural gas is practically odorless and is free from carbon monoxide. In systems using natural gas only, odoriferous substances such as ethyl mercaptan are added for detection of leaks in distributing systems. In some cities water-gas is mixed with the natural gas so that the average composition varies from 2.5 to 3 per cent of carbon monoxide.

Van Deventer[34] has found that about five per cent of the automobiles that he tested on the highways had dangerous concentrations (0.03 per cent or more) of carbon

*Read at the Seventy-third Annual Meeting of the Michigan State Medical Society, Detroit, September 21, 1938.

monoxide in the air that the driver breathes; "dangerous concentrations," being those that, breathed for many hours, may produce dizziness, collapse, and even unconsciousness and death.

Forbes[10] and associates found that none of their subjects were affected whose blood was 25 per cent saturated, and that their performances in simple tests of reaction times, binocular vision, coördination of the hand and eye, etc., were unaffected by breathing carbon monoxide until their blood was 30 per cent or more saturated. At 45 per cent saturation their performance was only slightly impaired. Subjectively, they felt normal at 30 per cent saturation or less but at 45 per cent both appeared and felt unequal to driving a car because unable to think of many things at once. The pulse, respiration and blood sugar were unchanged up to 30 per cent saturation.

In a death case at Oshkosh, Wisconsin, involving inhalation of exhaust gases, I submitted six subjects to the inhalation of the exhaust gases at various distances from 6 to 15 feet for a period of fifteen minutes. All the doors and windows of this commercial garage were closed. It was alleged in this case that a man who was repairing a generator on his car which consumed about fifteen minutes of his time, inhaled gas from the exhaust of another car, which was being tested in the garage; that after the repair work on his car was completed he drove the car home, dying about one and one-half hours later with what appeared to be a coronary occlusion. Since an autopsy was not permitted it was necessary to perform experiments in this garage under the same conditions under which he worked, and which proved that only one of six subjects developed a 30 per cent saturation. This individual complained of a headache for several hours afterward. The others were unaffected. The blood pressure and pulse of all subjects were unchanged. Wilson[36] and his colleagues demonstrated carbon monoxide in the blood of fourteen traffic policemen, in six of whom the amount ran from 20 per cent to 30 per cent carbon monoxide hemoglobin. Owens[28] states that the exhaust from heavy oil engines, such as Diesel engines, contains a lower proportion of carbon monoxide than that coming from petrol engines. The safe limit for carbon monoxide in the air is given by Haldane,[14] who studied conditions in the London Underground Railway, as 0.01 per cent for continuous exposure. On the other hand, Henderson[15] and his colleagues allowed as much as 0.04 per cent, since it was supposed that no one could remain in that atmosphere for more than three-quarters of an hour, and that in that time, and at such a concentration of carbon monoxide, would suffer only a frontal headache. Bloomfield and Isbell[5] reported that the average of 141 tests made in city streets at parking hours of traffic showed a contamination of 0.8 part of carbon monoxide per 10,000 parts of air.

Brondum and Ray[7] from their experimental work came to the conclusion that in cases of acute poisoning by motor exhaust fumes, where both carbon monoxide and gasoline vapors are present, the toxic effects of carbon monoxide are probably not enhanced by the gasoline vapor. The carbon monoxide, being much more toxic, would react before the gasoline would have an opportunity to show its toxic symptoms. Leaks in the exhaust pipes of motors in pleasure boats have been responsible for numerous cases of illness. Since many cases of illness have been reported from inhalation of gases in automobiles on long trips, it may be of interest to know where the carbon monoxide might come from. (Table I).

TABLE I. CRANK CASE GAS ANALYSIS

1. From crank case, motor racing:
   Carbon monoxide 0.9%, or 90 parts per 10,000 of air
   Carbon dioxide.. 2.9%, or 290 parts per 10,000 of air
   Oxygen....16.5%, or 1650 parts per 10,000 of air
2. From crank case, motor idling:
   Carbon monoxide 1.4%, or 140 parts per 10,000 of air
   Carbon dioxide.. 4.0%, or 400 parts per 10,000 of air
   Oxygen....15.1%, or 1510 parts per 10,000 of air
3. From exhaust, no dilution:
   Carbon monoxide 4.0%, or 400 parts per 10,000 of air
   Carbon dioxide ..12.1%, or 1210 parts per 10,000 of air
   Oxygen.... 0.2%, or 20 parts per 10,000 of air

The average composition of the exhaust gas by volume of twenty-three cars in this country is shown in Table II.

TABLE II

Carbon dioxide	8.6
Oxygen	2.3
Carbon monoxide	6.3
Methane	0.9
Hydrogen	3.0
Nitrogen	78.6

With the increased use of natural gas, the number of carbon monoxide asphyxiations has been markedly decreased in recent years as shown in Table III. The more extended use of electricity as means of illumination and fuel is also a factor in this decrease.

TABLE III. DEATHS DUE TO CARBON MONOXIDE POISONING IN COOK COUNTY

1917	1918	1919	1920	1921	1922	1923	1924
470	479	518	386	237	214	361	412
1925	1926	1927	1928	1929	1930	1931	1932
320	403	375	398	237	310	323	188
1933	1934	1935	1936	1937	1938		
128	143	*74	80	**63	***54		

*(Of this 74, 46 were due to auto gas).
**(Of this 63, 39 were due to auto gas).
***(Of this 54, 22 were due to auto gas.)

Carbon monoxide may be freely respired, its presence in air is not manifested by either irritation to the air passages or by its affecting the sense of smell as is noted with sulphur dioxide gas used in mechanical refrigeration. However, the moment carmon monoxide comes in contact with the blood, by diffusion, it unites with the red pigment of the blood corpuscles, forming a definite compound, carbon monoxide hemoglobin (HbCO). The corpuscles are not dead. All they need is oxygen under sufficient tension to displace the carbon monoxide.

Death in cases of carbon monoxide asphyxia is due to failure of respiration of the nature of a fatal apnea vera. Haggard further states that the lack of oxygen resulting from the formation of CO hemoglobin induces excessive breathing, which in turn results in an abnormal loss of carbon dioxide followed by failure of respiration. The increasing anoxemia from this cause speedily results in the development of heart block through its various stages. I believe there is a toxic factor in carbon monoxide poisoning besides that of anoxemia. Taking a parallel situation where the hemoglobin is reduced 30 per cent or more, as in the anemias, headaches are not present, whereas in carbon monoxide intoxication a similar reduction of hemoglobin causes a headache.

Most of the interest in carbon monoxide poisoning in the past had been centered in massive doses where death occurred suddenly. The neurological side of those recovering from an intoxication has been neglected. However, in the last few years greater interest has been taken in this phase, and the literature now contains more frequent references to the neuropathology.

The neurological conditions which have been reported more often following carbon monoxide poisoning are: multiple neuritis, paralysis agitans, disseminated sclerosis and dementia. Recovery follows after a period of four months to a year and a half in the majority of cases.

Hufner[19] found that 1 gm. of carbon monoxide hemoglobin contains 1.338 c.c. of carbon monoxide, computed at O°C. and 760 mm. pressure. The oxygen absorbed from the air is normally taken up by the blood in the form of loose chemical combination with the red coloring matter (hemoglobin) of the corpuscles and in this form it is carried to the tissues in which it is used. Oxygen and carbon monoxide combine chemically with hemoglobin in equal molecular proportions, and, therefore, in equal volumes, the oxygen combination readily liberating its oxygen, while the carbon monoxide is relatively stable.

The blue flame at the surface of the fire in grates and blast furnaces shows the presence of carbon monoxide. Much escapes unburned. In furnaces with forced drafts the blue flame is often seen at the top burner in the superheaters of the air supply. It is, therefore, a constant constituent of the products of combustion of carbonaceous materials, and, while the poisonous action of charcoal, coke, and coal vapors is in part due to carbon dioxide, it is due mainly to this poisonous gas. Quantities of this gas accumulate above the fire in hot air furnaces and stoves. So much, indeed, that on opening the door the inrush of air will form an explosive mixture which, igniting, may produce serious accidents. The common construction of dampers is that they shall be loose enough to allow a constant draft to the chimney. Notwithstanding this, it frequently happens that a down draft fills the room with the products of combustion to a poisonous extent. The presence of any carbon monoxide in the atmosphere is due either to the faulty construction of the furnace, or to the action of the heated plates on the organic dust with which they are generally covered. Notwithstanding all attempts to render furnaces gas-tight, their lacking of this is seen in the rapid tarnishing of silverware as soon as the furnace is lighted; by the occasional

escape of furnace gas, detectable by its odor, or of smoke, which pervades the home. The general malaise and headaches during the winter months are undoubtedly due in many instances to the presence of this gas.

Carbon monoxide hemoglobin may be found in the blood of human beings up to twelve hours after removal from the source of exposure. In exceptional cases it may be found for longer periods of time. Out of forty-three consecutive gas cases received at the Cook County Hospital of Chicago, 34 per cent were examined within one-half hour from the time they were removed from the source of exposure, carbon monoxide being found in all of these; in 30 per cent the exact time was not known, but was greater than one-half hour, 27 per cent being positive and 3 per cent negative. Twenty to forty minutes elapsed in 14 per cent, 12 per cent gave positive tests and 2 per cent negative; 10 per cent were examined in three hours, all being positive, in another 10 per cent five hours elapsed, all were positive, and in 2 per cent after twelve hours all were positive.

Occasionally the question arises as to whether the carbon monoxide found in a dead body was absorbed from the atmosphere. In the experiments of Strassmann and Schulz,[33,35] it was demonstrated that carbon monoxide may penetrate, by diffusion, all parts of the cadaver, with sufficiently long exposures in air containing this gas.

Lethal Dose.—From experimental work it would appear that about 0.8 gm. (twelve grains) of carbon monoxide is fatal to a man of 70 kilos (154 lbs.). However, extremely small portions when breathed produce unmistakable evidence of poisoning. According to Gruber, 0.02 per cent is the limit of toxicity, while at 0.05 per cent symptoms were clearly observable.[12]

Henderson and Haggard,[16] from their studies, have arrived at a standard for calculating the toxic action of carbon monoxide which refers to the concentration of the gas and the time of exposure to it. When the time of exposure in hours multiplied by the concentration of CO in parts per 10,000 of air equals three, there is no perceptible physiologic effect; when it equals six, there is a just perceptible effect; when it equals nine, headache and nausea are induced; and when it equals fifteen or more the conditions are dangerous to life.

Carbon monoxide poisoning may be of interest in civil cases, for instance, under conditions in which death is due to chronic poisoning and the results amount to criminal negligence on the part of another.

One of my early cases, the first to be tried in a higher court in Illinois, illustrates this point. In the estate of Catchman Olsen vs. City of Chicago, the widow was given a verdict of $3,500, the death of Olsen having been proved as due to a leaky gas pipe in one of the repair shops of the city. When an insurance policy is involved it is of utmost importance that the presence of carbon monoxide be shown by chemical examinations, and to prove whether the case is a murder, a suicide, or an accident, as a policy may be voided in the case of suicide.

Symptoms.—The diagnosis of carbon monoxide is often very easy, sometimes difficult and never positive unless a chemical examination of the blood has been made.[25] The symptoms may simulate many other conditions. The reason for this is chiefly in the rate of absorption and the extent of the combination of the hemoglobin with the gas. When the volume of breathing is increased by muscular exertion the absorption of gas is proportionally increased. The smaller or younger the individual the quicker the saturation of the blood by carbon monoxide. In the resting stage the volume of breathing varies between individuals as a function of the surface area of their bodies. Small individuals succumb to carbon monoxide more rapidly than large individuals, for the volume of their respiration is greater in relation to the volume of their blood.

The symptoms may be classified under several groups:

1. The simple anoxemia where an overwhelming dose of the gas has been taken causing basal or frontal headaches, faintness, dizziness, coma, tremors, ringing in the ears, nausea, vomiting, and muscular weakness.

2. Disturbances of the central nervous system, in those who have recovered from acute poisoning — hyperesthesia, paresis, hemiplegia, polyneuritis, and psychosis.

3. Disturbance of the hematopoietic system in the form of severe anemias or a hypercythemia.

4. General diminution of the resistance of the body with resulting activation of an

old tuberculous process or other infectious processes, the person's resistance being so lowered that he may die of pneumonia.

5. Cardio-vascular syndromes, coronary thrombosis or coronary occlusion.

The onset of symptoms may be sudden, but usually there are warning sensations, such as headache, throbbing of the temples, ringing in the ears, faintness, dizziness, and vomiting. The face becomes red, and there is loss of memory, vertigo, fainting, anesthesia, and loss of all spontaneous power of movement. The heart action is at first violent, then weak, slow, and arrested. The body temperature is lowered.

Recovery is sometimes rapid; however, there is a slow return to consciousness, with a more or less prolonged headache, nausea, and weakness. If the patient does not respond to oxygen and carbon dioxide treatment within a half hour, the prognosis is very poor. The paralysis and anesthesia begin in the lower extremities and rise to the trunk. The loss of power and sensibility is frequently shown by the severe burns received by a person falling on a gas or other stove or a brazier. Loss of consciousness is often sudden. At other times there is a slowly increasing drowsiness. Pneumonia not infrequently follows the intoxication.

Chronic carbon monoxide poisoning may result from being in a constantly contaminated atmosphere. The symptoms are described as an alteration in the digestion, diminished vigor, gray color of the skin, coated tongue, loss of memory, diminution of the psychic powers, and occasional convulsions. Killick[20] from human experiments found that acclimatization occurs to a certain extent inasmuch as symptoms of poisoning are lessened during successive exposures to the same concentration of carbon monoxide.

The symptoms resulting from inhalation of carbon monoxide depend upon the extent of combination of the hemoglobin with the gas. Table IV gives the average physiological response to the various percentages of saturation of the hemoglobin with carbon monoxide.

The author found glycosuria in about 20 per cent of the cases of carbon monoxide poisoning admitted to the Cook County Hospital. This condition is not peculiar to the action of carbon monoxide, but follows asphyxia from other causes, being the result of the pouring out of adrenalin into the circulation under the stimulus of asphyxia with resultant increased supply of blood sugar from the liver under the stimulus of the adrenalin. In the acute stage, diagnoses of food poisoning, strychnine poisoning, diabetes, and alcoholism have been made in cases of carbon monoxide poisoning. The symptoms are so varied that a physician is reminded of diseases of the brain, spinal cord, lungs, kidneys, liver and skin.

Treatment.—The person must be removed from the poisonous atmosphere and into the fresh air and artificial respiration introduced as soon as possible. Ten per cent carbon dioxide and 90 per cent oxygen is more effectual than the 5 per cent mixture of carbon dioxide.

Postmortem Appearances.—Poisoning by a small amount of carbon monoxide may produce very few changes, or if the patient lives for a number of hours after exposure, only a careful examination of the blood will reveal the presence of the gas. The skin usually has a cherry-red color. The surfaces of the dependent parts of the body are of deeper red than the other parts. The most characteristic finding is the bright cherry-red blood, usually fluid and coagulating slowly, present in the arteries, veins, and all of the tissues. Hemorrhages may be found in the pleural cavities, also in the gastric and intestinal mucosa, and in the leptomeninges under conditions difficult to explain, except under carbon monoxide poisoning.[25] A very characteristic change in prolonged carbon monoxide poisoning is the occurrence of punctiform hemorrhages and softening in the cortex and central nuclei of the brain, notably in the two internal segments of the lenticular nucleus. Carbon monoxide may cause hemorrhage and necrotic myositis. The kidneys may show fatty degeneration and necrosis in the convoluted tubules. Where life has been prolonged, the skin may show herpes, blebs, and pemphigus followed by gangrene.

Sequelæ of Carbon Monoxide Poisoning.—The sequelæ of severe gassing are usually abnormalities of spinal function, and the anatomical changes are found chiefly in the central nervous system. The lesions in the central nervous system are primarily vascular, with degenerative changes caused by lack of nutrition.

Schillito[30] examined the records of seven state institutions that serve the New York

city area, and found that thirty-nine patients were poisoned during a ten-year period, 1925-1935, while four were poisoned either before or after this period. In the same period there were more than 21,000 carbon monoxide exposures in the same area. There were thirty-nine cases of phychoses due to carbon monoxide poisoning. The ratio of carbon monoxide psychoses to other psychoses gives the incidence percentage of 0.05 per cent or roughly one carbon monoxide case to 2,000 other psychoses.

A psychosis, most usually temporary in character, was the most common manifestation of the after-effects of carbon monoxide poisoning. It is marked by confusion and bewilderment, combined with loss of memory. Events occurring at the time of the accident were forgotten.

Amnesia in some form was the most regular feature of the psychosis following carbon monoxide poisoning. It usually consists of defects in memory. Nervous sequelæ consisted of signs varying from slightly increased deep reflexes to well advanced Parkinsonism. Sensory disturbances, such as skin anesthesia and peripheral motor neuritides were also encountered. All of these cases will show improvement, but the final result depends upon the degree of the initial damage.

The reason for the various neurological symptoms following carbon monoxide poisoning can be better understood after studying the neuropathology produced in dogs by acute and chronic poisoning of the animals; from the circulatory changes characterized by dilatation, stasis, perivascular hemorrhages, and edema in acute cases—to degenerative changes in the nervous system.[37]

Carbon monoxide may be determined by chemical means or by the use of the microspectroscope. Chemical tests include the use of tannic acid, pyro-tannic acid, hydrogen sulphide, and sodium hydroxide, all of which may be made in a physician's office without any unusual laboratory apparatus. When blood is added to diluted hydrogen sulphide water drop by drop, it produces a bright red precipitate when carbon monoxide is present, otherwise a bright green. When blood is diluted one part to four with water, an equal quantity, say 2 c.c. of the unknown, being added to 2 c.c. of 1 per cent tannic acid solution freshly made and allowed to stand at least twelve hours, the blood will be of light red to deep carmine-red color if carbon monoxide is present, while the normal blood appears gray. When an equal quantity of 10 c.c. lead acetate is added with diluted blood, a carmine-red color is produced, while normal blood takes on a gray color. A number of quantitative methods for the determination of carbon monoxide in blood and air are available, but require considerable laboratory apparatus.

Guillain and Hereboulat[13] reported a case of syringomyelia caused four years previously by carbon monoxide intoxication. In 1935 the author saw a truck driver poisoned by exhaust gases that entered the cab of his car. He was discharged after one week as cured of carbon monoxide poisoning. Later, he developed periods of amnesia accompanied by sensory and motor disturbances, resembling those of a polyneuritis.

The patient complained of periods of dizziness and unsteadiness of gait and inability to drive for a year later. A number of cases that I have seen developed symptoms similar to that of Korsakoff's syndrome—there was a defect of recording of current events with mental confusion, and the symptoms were usually greatly exaggerated. Pains in one or both legs were complained of and occasionally signs of polyneuritis were noted. These usually clear up in the course of a few months.

Lipf[21] reported a case of a woman twenty-three years of age, who atempted suicide with illuminating gas. The patient became apathetic and disoriented. Paralysis of both lower extremities developed. There were involuntary micturitions and defecations. The patient became gradually more unconscious and stuporous, and finally died. Autopsy showed a swelling of the spinal cord at the level of the twelfth thoracic segment. There was a perivascular round cell and leukocytic infiltration, and deposition of brownish pigmentation. The neurological symptoms were due to a local edema at the level of the spinal cord caused by the carbon monoxide intoxication.

The neurological phases of carbon monoxide poisoning are too extensive to be covered in a general paper of this nature. I am including references to several papers, which give in detail some of the points that I have covered.

I have seen cases of coronary occulsion in firemen, who, while working at a fire, in-

haled an excess of smoke, became sick, and died after returning to their stations. At the autopsy coronary occlusion was found. Myocardial involvement resulting from carbon monoxide poisoning is more common than is generally assumed. Coronary lesions due to carbon monoxide have been reported by many authors. Nagel[26] reported two of his own cases, and four from the literature, Strassman found hemorrhages in the heart. Hyperthyroidisms caused by carbon monoxide have been reported by Baader[2] and Schulze.[31]

References

1. Ajieriaguerra and Danniezan: Paris Medical, 2:189, 1937.
2. Baader, E. W.: Arch. f. Gewerbepath. und Gewerbehyg., 7:227, 1936.
3. Beck, H. G.: Clin. Med., 5:1088, 1927.
4. Becker, E.: Arch. Neurol. Path. Lab. Lond. County Asyl. Claybury, Lond., 3:246, 1907.
5. Bloomfield, J. J. and Isbell, H.S.: Pub. Health Reports, Reprint No. 1217, (March) 1928.
6. Borman, M. C.: Am. Jour. Psychiat., 6:135, 1926; abstr., Jour. A.M.A., 87:1769, 1926.
7. Brondum, H. W., and Ray, G. B.: Jour. Indust. Hyg. and Toxic., 19:321, 1937.
8. Daday, Henger and Mathon: Ann. Med. Psychol., 95:771, 1937.
9. Dancey, T. E.: Canadian Med. Assoc. Jour., 35:47-49, 1936.
10. Forbes, W. H., Dill, D. B., de Silva, H. and Van Deventer, F. M.: Jour. Indust. Hyg. and Toxic., 19:598, 1937.
11. Grinker, R. R.: Jour. Nerv. and Ment. Dis., 64:18, 1926.
12. Gruber, Max: Neber den Nachweis und die Giftigkeit des Kohlenoxyds, und sein Vorkommen in Wohraumen. Arch. f. Hyg., 1:145, 1883.
13. Guillain, G. and Hereboulat, Jean: Paris Med., 2:227, 1936.
14. Haldane, J. S.: Brit. Med. Jour., 2:16, 1930.
15. Henderson, Y.: Jour. Indust. Hyg., 3:79, 1921.
16. Henderson and Haggard: Jour. Indust. and Eng. Chem., 14:229, 1922.
17. Hitchcock, C. W.: Jour. A.M.A., 71:257, 1928.
18. Hiller, F.: Ztschr. f. d. ges. Neurol. u. Psychiat., 93:594, 1924.
19. Hufner: Arch. f. Physiol., 130, 1894.
20. Killick, E. M.: Jour. Plupiol., 87:41, 1936.
21. Lipf, H.: Deutsche Ztschr. f. Nerven., 142:39, 1937.
22. McNally, Wm. D.: Arch. Path. and Lab. Med., 5:43-48, 1928.
23. McNally, Wm. D.: Ill. Med. Jour., (May) 1931.
24. McNally, Wm. D.: Toxicology, p. 317, 1937.
25. McNally, Wm. D.: Toxicology, p. 352, 1937.
26. Nagel, H. G.: Deutsche Med. Wchnschr, 63:301, 1937.
27. O'Malley.: Jour. A.M.A., 59:1540, 1912.
28. Owens, J. S.: Lancet, 154-155 (Jan. 21) 1933.
29. Pineas, H.: Ztschr. f. d. ges. Neurol. u. Psychiat., 93:36, 1924.
30. Schillito, F. H., Drinker, C. K. and Shaughnessy, T. J.: Jour. A.M.A., 106:669, 1936.
31. Schulze, E. P.: Arch. f. Exp. Path. and Pharm., 180:639, 1936.
32. Strassman, G.: Vrtljschr. f. Gerichtl. Med. Berlin Series 3, 58:50, 1919.
33. Strassman and Schulz: Berl. klin. Wchnschr., 41:1233, 1904.
34. Van Deventer, F. M.: Public Safety, 9, No. 8, 1935.
35. Wachholz and Limburger; Vrtlischr. f. Gerichtl. Med., Berlin, 3F., 23:223, 1902.
36. Wilson, E. D.: Jour. A.M.A., 87:319, 1926.
37. Yant, W. P.: Chornyak, J., Schrenk, H. H., Patty, F. A., and Sayers, H. H.: Pub. Health Bull., No. 211, (August) 1934.

MASSIVE GANGRENE OF THE COLON SECONDARY TO ACUTE APPENDICITIS

VIGGO W. JENSEN, A.B., M.S., M.D.

SHELBY, MICHIGAN

The following two cases are presented, and may be of interest because of massive character of pathology and rarity of occurence, being a thrombotic process extending by continuity from an acutely inflamed appendix.

The diagnosis of gangrene, small or large, of cecum or large bowel, is usually not made pre-operatively because the clinical picture of appendicitis simulates the symptoms of gangrene: Secondly the patient in those instances where gangrene of any extent has been diagnosed, in the operating room, has usually been too ill to survive an extensive resection of the bowel. In other words, when gangrene involves more than the immediate area of the appendix permitting immediate resection, the prognosis is very poor.

The following two cases are reported as massive gangrene of the large bowel secondary to acute appendicitis:

Mr. H. H. was seen about 4 P. M. by Dr. J. Nicholson, January 14, 1935, with complaint of nausea and distress of two days' duration in the right lower quadrant of the abdomen. He found in a robust male, twenty-five years old, a temperature of 100 degrees F., with tenderness in the right lower quadrant and slight rigidity. Hospitalization for observance was advised.

The laboratory technician reported a white count of 13,680, red count of 4,600,000 and a hemoglobin 75 per cent.

The following morning, white cells numbered 13,000 with no marked improvement in symptoms or physical signs. Laparectomy was advised.

Under general anesthetic, through right rectus incision, the appendix was freed retrocecally. It was bound down by old adhesions and was gangrenous. The head of the cecum and ileocecal valve were not involved, i.e., inflamed, no free fluid in abdominal cavity. The appendix was amputated, stump inverted and soft rubber dam, drain inserted into the retrocecal area. The incision was closed in layers. The patient returned to the ward in good condition and remained so until midnight when the pulse became rapid. Pulse 140; respiration 16—; temperature 104 degrees F., the patient stating "he felt good." At 6:20 A. M., pulse 135, respiration 12, the patient passed large liquid black stool with occasional flecks of clots. From then until 5:00 P. M.

he was annoyed by occasional cramps and two black liquid stools but again stated he felt fine.

Undecided as to the origin of the black stools, preparation for possible transfusion was made, but the white count obtaining 5,600, with hemoglobin 75 per cent, pulse rapidly rising, and temperature 106.4, it was concluded some factor other than hemorrhage was present.

The patient expired the following morning, January 16, 1935, with similar bloody fluid coming by mouth, per rectum and through the drainage area in the abdominal wall.

By professional courtesy, regional post mortem was done by enlarging the incision and the following pathologic condition found: Frothy serosanguineous exudate from nose and mouth; abdominal cavity contained about one quart of serosanguineous fluid black in color; cecum acid, ascending colon to the hepatic flexure and about 10 inches of ileum were black in color. Lumen of affected gut contained liquid black fluid. Mucous surfaces throughout the black portion were devoid of luster and when wiped dry were a dull yellow color.

Microscopic report by Dr. Wm. McGerman, Blodgett Memorial Hospital, reads as follows: "An intestinal mass about 9 inches in diameter showing an extensive inflammation. Sections show an extensive inflammation, necroses and gangrene. There is marked vascular thrombosis which has probably been secondary to a similar process in the appendix and, as sometimes happens, has involved the blood supply of lower cecum.

The second case is as follows:

Mr. R. D., male, aged 36, was seen November 13, 1936, at 3:00 P. M. in my office, complaining that during the past two days he had had some pain in the lower right quadrant, near the interior superior spine, passing across the abdomen; headache at times but neither vomiting nor nausea since onset. He had been attending to his work, peddling, with effort that day because of soreness in his abdomen.

The patient admitted frequent similar attacks of pain, associated at times with nausea and vomiting.

One brother died from appendicitis; a second brother survived appendectomy in 1921.

The patient looked sick, temperature 97, pulse 74. Examination of abdomen revealed tenderness on deep pressure over McBurney's point, Morrison's sign negative, Rovsing sign negative; pressure over lower pelvic area caused pain in the right flank.

Because the patient appeared ill out of all proportion to physical signs, a blood count was taken and a count of 9,050 white cells was obtained. Operation was advised but refused and the patient returned home.

At 8:00 P. M. the patient was brought into the hospital because of cramps. Immediate operation was done, through a right rectus incision. The following facts were obtained: Appendix, floating free in pelvis, was acutely congested but hard throughout. Abdominal cavity contained fluid of mucoid consistency with grey flecks here and there, floating in the fluid.

Appendix was amputated, stump inverted and abdominal walls closed in layers.

The patient was returned to the ward cyanotic. There was considerable difficulty in getting the patient anesthetized and kept so because of cardiac embarassment setting in with the surgical anesthetic. He entered the operating room at 9:30; operation began at 10:00, closed at 10:35 P. M.

The usual postoperative support was carried out. Hypodermoclysis, morphin for pain and insulin U x q 4 hours administered.

The patient reacted at 12:00 P. M. Temperature was 96.8, pulse 72, respiration 24. He was fairly comfortable until 3:00 A. M. when he vomited a brownish red fluid. Duodenal tube was inserted at hourly intervals but emesis of similar fluid continued until exitus at 8:10 P. M., the patient being comfortable except for emesis.

By professional courtesy, the operative incision was enlarged from ribs to symphysis. The abdominal cavity contained a free reddish brown fluid; ileum was normal except for terminal 4 inches; head of cecum and ascending colon to about middle of transverse colon, was black in color; lumen of bowel contained reddish brown fluid with specks of clotted blood here and there.

These cases appear interesting to us because of dissimilarity of symptoms. Extremes of thermal and vascular reaction; dissimilarity of gastro-enteric reaction, one having melena suggestive of enteric hemorrhage, the other emesis suggestive of severe acidosis. Neither case at the time of operation showed any local evidence of oncoming massive gangrene of the large bowel.

Literature

1. Cabot Case Records: Carcinoma with gangrene of caecum; coronary sclerosis with gangrene of caecum, 202:No. 7, 339.
2. Finnery, T. M. T.: Complications and deaths occurring in appendicitis. American Journal of Surgery, page 156, (June) 1933.
3. Higham, A. R.: Lumbar hernia with gangrene of caecum. Lancet, 1:No. 11, 1935.
4. Lockwood, A. L.: Acute intestinal obstruction involving appendix. Canadian Med. Assn., Jour., (Sept.) 1930.
5. Wing, L. A.: Report of case of gangrene of caecum in newborn. Ann. Surg., p. 156, (Jan.) 1932.

TWO "LIVER DEATHS" FOLLOWING OVARIOTOMY

HERBERT W. HEWITT, M.D., F.A.C.S.
DETROIT, MICHIGAN

While there have been many cases of liver deaths following biliary surgery reported in the literature, there are few such deaths recorded in which the surgery was done in other parts of the body. Although it has been considered that operations upon the biliary tract have been responsible for these unusual and practically incomprehensible deaths, yet, liver deaths are not confined to surgery of the biliary tract alone.

In July, 1935, the author[11] reported two cases of liver deaths following cholecystectomy. Now he wishes to report two cases of ovariotomy followed by high temperature deaths.

Case 1.—(No. BL482) The patient entered Grace Hospital on September 18, 1934. Examination revealed a white female, fifty-eight years old, 5 feet 4 inches tall and weighing 180 pounds. After a preliminary physical examination and laboratory work she was judged to be in very good condition for operation. Pre-operative diagnosis was a left ovarian cystoma. The patient had been unusually well for some time prior to the operation. Twenty years previously she had had a resection of the stomach for a gastric ulcer at the pylorus, performed by the author. Convalescence was stormy but the patient has been in good health ever since. Except for this operation her past history is negative.

For two months previous to present admission patient had noticed a swelling in her lower abdomen. She was advised that she had an ovarian cystoma which should be removed. Patient had no pain, loss of weight, vaginal bleeding or other symptoms.

Her blood count taken on September 18, 1934, was as follows: Hemoglobin 89 per cent; erythrocytes 4,460,000; leukocytes 7,300; polymorphonuclears 58 per cent; mononuclears 32 per cent; eosinophiles 3 per cent; basophiles 1 per cent; and monocytes 1 per cent. Blood grouping placed her in group II. Urine negative.

At operation on September 20, a large malignant ovarian cystoma was removed. There was no surgical shock. Almost immediately after operation her temperature began to rise. Six hours after operation, her temperature reached 104°. Her pulse rate was 120. She immedately developed symptoms as follows: progressive oliguria, anuria, extreme nervousness, delirium and uremia, followed by death in thirty-six hours. Her abdomen remained flaccid following operation and her temperature at the time of death was 105.8°. No autopsy was permitted. Pathological report was spindle cell sarcoma of the ovary.

Case 2.—(No. 21948) The patient was a white female, unmarried, age fifty-eight years. She had a pelvic tumor gradually enlarging for a number of years. During the past year it had rapidly increased in size until at the time of operation it was as large as a fetal head. Blood pressure, 132/70. Blood: Hemoglobin 72 per cent; erythrocytes, 3,600,000; leukocytes 5,700; polymorphonuclears 64 per cent; mononuclears 43 per cent; large mononuclears 2 per cent; basophiles 2 per cent. Blood typing placed her in group II. Urine negative. Physical examination otherwise negative.

Following two days of pre-operative preparation in the hospital this patient was apparently in good condition for laparotomy.

Operation was performed July 7, 1936. The left ovariotomy was done for a large malignant ovarian cystoma. Operation required less than one hour's time and the patient suffered comparatively little shock. On the third day, however, she became drowsy. She was given glucose by mouth, rectum and intravenously. Also two blood transfusions were administered; all to no avail. She slowly developed the classical hepato-renal syndrome, viz.: oliguria, anuria, coma and death on the sixth post-operative day. Her temperature on the sixth day reached 107°. Pathological diagnosis: Adeno-carcinoma of the ovary, Grade 3. No autopsy was permitted.

A search of the literature has brought to light only one other such case of high temperature death following ovariotomy. This was reported by Connell.[6]

Because of the many excellent articles already published on "liver deaths," high temperature deaths and hepato-renal deaths there is no necessity to go into detail here regarding the history, symptomatology, et cetera, of this condition. A brief review of this subject, however, might not be out of place.

Charles Gordon Heyd[12] in 1924 first described the syndrome preceding certain deaths following operations upon the biliary tract, and termed them "liver deaths" because no other of the usual "causes of death" fitted the clinical picture. He classified his cases into three groups as follows:

1. Liver deaths associated with hyperpyrexia and coma—a rapidly developing lethargy, stupor and coma. Death occurs in eighteen to thirty-six hours.
2. Liver deaths in the presence of a constantly diminishing jaundice—slowly developing stupor and coma; final clinical picture similar to "cholemia death" from cirrhosis of the liver.
3. Liver deaths associated with some unrelated kidney disease—anuria is a factor in the terminal picture. Forty-eight hours after operation there is a clinical picture not dissimilar to shock, with cold, clammy skin; failure in water elimination, and a marked rise in non-protein nitrogen.

In group one the so-called "liver deaths" are the result of a disturbed or altered chemistry incident to liver failure. In group

three the cases are associated with more far-reaching chemical disturbances in which renal function and water balance are pronounced factors. In a more recent article Heyd[13] states:

> "From time immemorial, coma and liver deaths had been associated in the minds of clinicians, and not infrequently the surgeon has had an inexplicable death following rather simple gallbladder surgery and has been unable to comprehend either the cause of the mortality or the mechanism of its production. It has been our impression that these obscure and inexplicable mortalities were in some way associated with either a failure of the liver to exercise its normal and adequate protective function or that as a result of anesthesia, trauma, absorption, hemorrhage and disturbed intra-hepatic physiology, the protection ordinarily afforded by the liver was inadequate."

Heyd made a study of 557 personal cases of gallbladder disease submitted to operation, together with an analysis of the mortality rate. Many were operated upon without pre-operative preparation by reason of the serious condition when the patient entered the hospital. There were thirty-nine deaths out of 557 unselected cases, or a general mortality of 7 per cent; there were eight so-called "liver deaths," giving a mortality per se of 1.4 per cent of the total mortality.

In the "liver deaths" there were two in group one; three in group two; and three in group three. The frequency of groups two and three indicates the increase in the mortality rate in the delayed or late cases of gallbladder disease. In all of the lethal cases there was definite visible evidence of liver change, in the degree of glissonitis or fibrous changes in the capsule of the liver.

Boyce, Veal and McFetridge[4] in an analysis of 100 consecutive deaths reported the liver death syndrome in twenty-three patients. Many other authors have written on this same subject; reporting, however, only cases of death following operations upon the biliary tract. (Eiss,[9] Schutz, Helwig and Kuhn,[15] Deaver,[7] Boyce and McFetridge,[2] Stanton,[17] Connell,[5] Sutton,[18] Furtwangler, Orr,[14] et al.)

In 1934 Connell reported five cases of high temperature deaths in operations other than those upon the biliary tract, viz.: ovarian cyst, uterine fibroid, interval appendicitis (2) and ventral hernia. DeCourcy[8] reports two abdominal operations (colostomy; hysterectomy) followed by high temperature deaths.

Quoting from Boyce:[1] "Orr observed a case as a late complication of mammary carcinoma. LeNoir noted it after surgery for gastric ulcer. Heuer reported a case after splenectomy for Banti's disease. Twenty-six cases of postoperative heat stroke collected by Cutting, only a few of which followed biliary surgery, seem likely in the light of our present knowledge to fall in the same category." Slevin[16] reported a case following thoracostomy for empyema.

Boyce[3] (The Charity Hospital of New Orleans) states: "Furthermore in a series of casually selected recent autopsies, comprising burns, intestinal obstruction, and thyroid disease, we were able to find case after case in which there was evident a striking parallelism with the deaths which occurred after surgery for biliary and pancreatic disease and after liver trauma." Boyce believes that the liver-kidney syndrome is a single pathological process.

The explanation of these hepato-renal deaths, as based upon the experience of many surgeons who have studied the subject, may be summed up as follows: The patient with biliary disease, whether or not gross obstruction is present, always exhibits some degree of liver damage, which is not, however, incompatible with the stress and strain of ordinary life. But, when surgery is undertaken, even under the most favorable circumstances, other factors are introduced, including the anesthesia, the trauma of the surgical manipulation, the associated drop in intra-abdominal temperature, and changes in intrahepatic and biliary pressure; and with these new factors, the liver, already the seat of a pathological process, cannot cope. As a result, its function promptly fails, and the toxic substances which reach it in the course of normal body metabolism are thrown off undetoxified. Then the liver cells, as they become increasingly unable to function, themselves undergo some necrotic change and themselves discharge into the circulation some additional toxic product which originates in their own degenerating cellular substance. Further: The kidney, which is, after the liver, the great detoxifying organ of the body, must take up the work of the liver, purely as a matter of physiology, when the detoxifying function of the liver fails. But, in the kidney, the margin of safety is very slight, and it is not fitted to handle even the normal products of

body metabolism, let alone, in addition, the toxins liberated by the damaged liver cells. It promptly breaks down in its turn therefore, and an overwhelming and lethal toxemia is the natural consequence. The hepatic changes in these cases always precede the kidney changes. And it is our further opinion that if the patients who die promptly with hyperpyrexia and who exhibit liver degeneration at the autopsy could be kept alive long enough, they also would show precisely the same clinical and postmortem renal changes as do the patients who die later with typical symptoms of uremia. The pathological process should center in the kidney, since its convoluted tubules are the normal channels of excretion for foreign proteins, which they assume these liver toxins to be.

The conclusion, then, is obvious, viz.: Any patient with a damaged liver is a poor risk, not only for biliary surgery, but for any surgery at all.

What can we do to prevent these hepatorenal deaths? While we all are cognizant of the fact that, due to the multiple functions of the liver, no test for liver function is of much value, we must recall that Graham[10] several years ago reduced his mortality in biliary operations from 7 to 1 per cent by the use of phenoltetraiodophthalein dye test. While Graham does not claim that this dye is a test for liver function, we must admit that any test that will aid in reducing mortality from 7 to 1 per cent is worthy of trial. Zielinsky believes that liver function should be evaluated by tests of kidney function; and that in all types of biliary disease, evidence of renal insufficiency should be regarded as presumptive evidence of hepatic insufficiency.

Another factor is the selection of a proper anesthetic. In the author's hands, nitrous oxide with an incision thoroughly anesthetized with local anesthesia results in the production of less liver damage than any other type or combination of anesthetics.

Other factors are:

1. Careful routine examination of the patient including all necessary laboratory procedures;
2. Maintenance of normal water balance and blood chlorides;
3. Protection of liver function by the administration of glucose, thus increasing the glycogen reserve of the liver;
4. Blood transfusion and intravenous calcium chloride when necessary;
5. A carefully performed operation done in a reasonably short time.

Bibliography

1. Boyce, F. F.: Surg., Gynec. and Obst., 61:122, July 1935.
2. Boyce, F. F., and McFetridge, E. M.: Arch, Surg., 31: 105, 1935.
3. Boyce, F. F., and McFetridge, E. M.: Southern Surgeon, 6:183, (June) 1937.
4. Boyce, F. F., Veal, J. R., and McFetridge, E. M.: Surg., Gynec. and Obst., 63:43-53, (July) 1936.
5. Connell, F. G.: Ann. Surg., 94:363, (Sept.) 1931.
6. Connell, F. G.: Ann. Surg., 100:319, 1934.
7. Deaver, J. B.: Trans. Amer. Gastro-Enterol. Asso., (1929), 32:463, 1930.
8. DeCourcy, J. L.: Ann. Surg., 106:No. 1., July 1937.
9. Eiss, S.: Ann. Surg., 98:348, 1935.
10. Graham, Evarts: Ill. Med. Jour., 60:197, 1931.
11. Hewitt, H. W.: Jour. Mich. Med. Soc., 34:421, (July) 1935.
12. Heyd, C. G.: Ann. Surg., 79:55, 1924.
13. Heyd, C. G.: Southern Surgeon, 6:No. 3, 183, (June) 1937.
14. Orr, R. G.: Am. Jour. Surg., 18:279, (Nov.) 1932.
15. Schutz, C. B., Helwig, F. C., and Kuhn, H. P.: Jour. A.M.A., 99:633, (Aug. 20) 1932.
16. Slevin, J. G.: To be published Am. Jour. Surg., (Aug.) 1939.
17. Stanton, E. MacD.: Am. Jour. Surg., 8:1026, (May) 1930.
18. Sutton, J. W., Jr.: Proc. Soc. Exper. Biol. and Med., 32:712, (Feb.) 1935.

BLOOD GROUPS AND THEIR MEDICO-LEGAL APPLICATIONS

ARTHUR W. FRISCH, M.D.

Department of Bacteriology, College of Medicine, Wayne University

DETROIT, MICHIGAN

The present-day concept of the four human blood groups takes its origin from the investigations of Karl Landsteiner (1900) who demonstrated three distinct types of blood by simply mixing the serum of one individual with the red blood cells of another. The fourth type was discovered by Decastello and Sturli two years later.[3,8] The scheme of the four blood groups as proposed by Landsteiner[7] and adequately supported by experimental evidence, depends upon the varying distribution of two agglutinogens in the red blood cell named A and B and two agglutinins normally present in the serum designated by the Greek letters alpha and beta (α and β). Thus only the following four combinations are possible: group A individuals whose cells contain the antigen A and in whose serum is found the anti-

body β; group B individuals whose cells contain the antigen B and in whose serum is found the antibody α; individuals of Group AB (universal recipients) whose cells contain both antigens A and B and in whose serum no antibodies are demonstrable; group O individuals (universal donors) whose cells lack antigens A and B and in whose serum antibodies α and β are both present. The agglutin α agglutinates the red blood cell containing the antigen A and in a similar manner, the antibody β clumps the red cell containing the antigen B (Table I).

TABLE I

Jansky Numberings	Moss Numberings	International Nomenclature*	Agglutinogens in R.B.Cs.	Agglutinins in Serum
I	IV	O	O	α and β
II	II	A	A	β
III	III	B	B	α
IV	I	AB	AB	——

*Classification proposed by Landsteiner.

The International Nomenclature is the one officially recognized by the Health Committee of the League of Nations and is recommended by the American Association of Immunologists. The Moss and Jansky numberings should be discarded entirely since they fail to give an insight into the mechanism of the four blood groups and because of the possibility of serious accidents which may and have resulted from confusing groups I and IV Jansky with IV and I Moss. Furthermore, as has been pointed out by Levine, the International Nomenclature is the only one which permits a discussion of the heredity of the blood groups.[12]

Although Landsteiner foresaw most of the medical and legal applications of the four blood groups in his original paper, it was not until the World War that even the necessity for transfusing compatible bloods became thoroughly established. At present, a transfusion is considered to be a relatively simple and safe procedure except in instances where violent and frequently fatal reactions have resulted from errors in typing.[18,19] Wherever possible the donor and recipient should belong to the same blood group as first checked by typing and rechecked by cross-matching the serum and cells of the donor and recipient. Occasionally in an emergency it becomes necessary to resort to the use of a universal donor (group O) and the transfusions in these cases will be safer if the agglutinin titre of the donor's serum is low. In this manner one may avoid the rare yet dangerous universal donor with an unusually vigorous concentration of antibodies in his serum.[4,16] Dr. O. A. Brines[2] of Receiving Hospital in Detroit has successfully used group O donors in a large series of transfusions.

For a description of the technic of typing and cross-matching together with a complete discussion of the possible errors and difficulties involved in these procedures, the reader is referred to the book "Blood Groups and Blood Transfusion" by Alexander Wiener.[21]

Inheritance of the Four Blood Groups

In 1910 von Dungern and Hirschfield showed that the four blood groups are inherited as Mendelian dominant characters.[20] The probable explanation of the mechanism of inheritance was advanced by Bernstein in 1924 who based his theory on three pairs of transmissable characters, genes A, B, and R. According to Bernstein, R (or O) is recessive and a symbol for the absence of genes A or B.[1] Thus the primitive germ cell may contain the pair of genes AA (homozygous) and in the division of the immature sperm or ovum into the mature form with half the original number of chromosomes and genes, all cells will possess the gene A. On the other hand an individual's gene makeup may be AO (heterozygous) and when chromosome reduction occurs, half of the cells will retain the gene A and the other half will be lacking in that property (group O). For this reason it is possible in matings involving two

heterozygous A or B parents, to obtain an O child. Actually it is not possible to differentiate serologically between homozygous (AA) or heterozygous (AO) individuals. Table II gives the various children to be expected from all possible matings.

TABLE II

Parents	Children Possible	Children Not Possible
OxO	O	A,B,AB
OxA	O,A	B,AB
OxB	O,B	A,AB
AxA	O,A	B,AB
BxB	O,B	A,AB
AxB	O,A,B,AB	.....
OxAB	A,B	O,AB
AxAB	A,B,AB	O
BxAB	A,B,AB	O
ABxAB	A,B,AB	O

An analysis of Table II shows that two general rules are applicable.

1. The agglutinogens A or B cannot be present in the blood of a child unless they are present in one or both parents.

2. In matings involving an O parent an AB child is not possible; similarly if either of the parents belong to group AB, an O child is not possible.

The Bernstein theory has been adequately confirmed both by family investigations and statistical studies of the incidence of the various blood groups in different races. At the present time, although thousands of bloods have been examined, only two authentic exceptions to rule 2 have been found.[5,6] In both these cases a suitable explanation compatible with the Bernstein theory, is available. All other discrepancies have been due either to faulty technic or are attributable to illegitimacy.[21]

The Agglutinogens M and N

In addition to the agglutinogens A and B the human red blood cell contains numerous other antigenic components which are only demonstrable when the antibodies are produced by immunizing animals. Two of these agglutinogens (M and N) were discovered and investigated by Landsteiner and Levine in 1928.[9] By means of absorption tests they were able to characterize three types of human blood. One type contained the antigen M, another the antigen N, and in a third both M and N were present. To date no human blood has been found which is lacking in both of these properties. In-as-much as the factors M and N are entirely unrelated to the well known blood groups, three types of group O blood are readily demonstrable. One type would be O^M, a second O^N, and the third O^{MN}. Similar subdivisions are possible for the blood groups A, B, and AB. Since antibodies specific for M and N are not present in normal human serum, these properties do not require consideration in the selection of compatible donors for transfusions. The above findings of Landsteiner and Levine have been amply confirmed by numerous investigators. For a description of the technic involved in the demonstration of the properties M and N the reader is referred either to the original paper[9] or to "Blood Groups and Blood Transfusion" by Wiener.[21]

TABLE III

Locality	%O	%A	%B	%AB
United States	45	41	10	4
Poland	32	38	21	9
Detroit	45	36	14	5
Eloise Hospital	43	35	13	9

Data modified from Weiner (21 p. 158).

TABLE IV

Locality	%M	%N	%MN
Berlin	31	20	49
Japan	30	24	46
France	33	21	46
Copenhagen	30	26	44
New York City	26	20	54
Eloise Hospital	32	26	42

Data modified from Wiener (21 p. 133).

During the past summer the author examined 260 bloods from the general patient population of Eloise Hospital, Eloise, Michigan.* The number of bloods studied is small but the results are presented to illustrate the distribution of the factors M and N in the vicinity of Detroit. If one

*The author is indebted to Drs. R. C. Johnson and S. E. Gould of Eloise Hospital for their coöperation and interest.

compares the results of the study at Eloise Hospital with the others listed, the agreement is fairly close. The high incidence of group AB may possibly be due to the large number of Polish patients whose bloods were examined. (Tables III and IV)

TABLE V

Type of Parents	Children Possible	Children Not Possible
MxM	M	MN,N
NxN	N	MN,M
MxN	MN	M,N
MxMN	M,MN	N
NxMN	N,MN	M
MNxMN	M,N,MN	....

zygous and the other heterozygous (Mx MN or NxMN) children of the parental types are to be expected in a ratio of 50:50.

5. In matings with both parents heterozygous (MNxMN) children of all types are possible and no exclusion can be made.

The correctness of the above theory of Landsteiner and Levine has been substantiated by various authors in a large series of family and statistical studies. Table VI illustrates the excellent agreement between the theoretical and actual values obtained from the examination of 2,365 children from various types of matings.

Inasmuch as one cannot exclude the possibility that some of the children were illegitimate, a portion of the error may be accounted for on that basis.

TABLE VI

Matings	per cent M		per cent N		per cent MN	
	theory	actual	theory	actual	theory	actual
MxM	100	99.5	0	0.0	0	0.5
NxN	0	0.0	100	100.0	0	0.0
MxN	0	0.0	0	1.0	100	99.0
MxMN	50	46.4	0	.6	50	53.0
NxMN	0	.4	50	50.9	50	48.7
MNxMN	25	24.3	25	21.9	50	53.8

*Data modified from Wiener.[21]

Heredity of M and N

In 1928 Landsteiner and Levine published the results of their findings concerning the inheritance of the agglutinogens M and N.[10] According to these authors, two genes are involved (M and N) both of which are equally dominant. Thus an individual of type M or N is always homozygous (MM or NN) whereas, the MN individual is always heterozygous. Table V shows all the possible matings and the following rules are applicable:[13]

1. The factor M or N cannot appear in the blood of a child unless it is present in the blood of one or both parents.

2. In matings involving M parents (MxM) all the children are of the same type. This rule also applies to NxN matings.

3. In matings of the type MxN the children are all of the type MN.

4. In matings where one parent is homo-

Medicolegal Applications

The success of the application of our knowledge of human blood to the solution of certain legal problems is due, as has been pointed out by Dr. Philip Levine, to the fact that "nature endowed the red blood cells with a number of substances which satisfy the following conditions: They appear yery early in life, are constant throughout life and cannot be changed by any known environmental influences; their demonstration is very simple as is the mechanism of their heredity."[15]

In 1903 Landsteiner and Richter demonstrated that it was also possible to group both dried and aged blood and the application of this fact was recommended for medicolegal purposes.[11] One is now able to determine the presence of agglutinogens A and B and frequently agglutinins α and β in minute quantities of dried blood stain. The following case reported by Fujiwara and

taken from Wiener[21] may be cited as an example.

"A murder had been committed by stabbing. From the nature of the wound, it seemed certain that some of the blood must have spurted on the murderer's clothes. Upon adequate grounds, suspicion of the murder centered upon a man K. He, however, denied any knowledge of it. The clothes of K were secured one month after the crime, and on them several brown irregular stains were found which by chemical and spectroscopic tests proved to be blood. The precipitin test showed that it was human blood, and further examination revealed that the blood belonged to group B, which was the same as that of the murdered individual. On the other hand, K was found to belong to Group A. K then confessed his crime."

Inasmuch as the agglutinogens A and B are present in other body cells such as sperm, liver, kidney and lung and also in saliva, urine, and seminal fluid, the scope of the application of such tests in forensic medicine has increased. For example, the agglutinogens A and B have been detected in the saliva on cigarette stubs and envelopes and also in semen on stained clothing.[21]

Perhaps the outstanding medicolegal application of blood tests is found in the determination of blood relationships. A much discussed example is the famous Watkins-Bamburger case in Chicago which was satisfactorily settled by means of blood typings. Mrs. W. returned from the hospital and found the label "B" on her baby's back. Similarly, Mrs. B. noticed that her child was labeled "W." A blood examination of the parents and children yielded the following information:

	Group		Group
Mr. B.	AB	Mr. W.	O
Mrs. B.	O	Mrs. W.	O
Baby "W"	O	Baby "B"	A

It is quite obvious that the two babies had been labeled correctly but had somehow been interchanged in the hospital. The Watkins mating (OxO) could never have resulted in an A child.

Blood tests have also been of value for the exclusion of paternity in cases where an individual is named as the father of an infant born out of wedlock or where the husband denies paternity. Two examples will be cited.

The first case is one from Detroit in which the author and Dr. Walter Glazer had the opportunity to examine the bloods. It represents an instance where an exclusion of paternity was possible on the basis of the four blood groups alone. Mr. X., a married man, was accused of being the father of Miss Y.'s child. Blood tests revealed the following:

	Group	Type
Mr. X.	B	N
Miss Y.	O	N
Baby	A	N

As can be seen from rule one under Table II, the property A could not be present in the blood of the child unless it was also represented in the blood of one or both parents. Therefore, Mr. X. was falsely accused and was not the father of Miss Y.'s child. Incidentally, the exclusion of paternity in this case was not possible using factors M and N alone. The father of the above child was an individual of the blood type A^N or AB^N.

The second case is also from Detroit and we present it to illustrate the application of the properties M and N in paternity disputes.

Mr. X and Miss Y had lived together as man and wife for six years and during this time four children were born. In 1939 Mr. X refused to support the children any longer on the grounds that he was not their father. Miss Y substantiated his statement and named a Mr. Z as the parent of all the children. Mr. Z did not deny relations with Miss Y but he did deny paternity. Blood from the three adults and four children was examined with the following results:

	Group	Type
Mr. X	A	M
Miss Y	O	N
Mr. Z	AB	MN
Jane	A	MN
Frank	A	N
Lloyd	B	N
Mabel	A	N

On the basis of the four blood groups alone Mr. X could only be excluded as the father of Lloyd since the property B did not appear in the blood of Mr. X and Miss Y. However, Frank and Lloyd were twins and therefore it seemed likely that Mr. X was also not the father of Frank even though an A child was compatible with the above mating. Nevertheless, if one considered the possibility of superfetation wherein two different males may impregnate separate ova in the same female, then Mr. X might well have been the father of one of the twins. On the basis of M and N however, Mr. X was definitely excluded as

the parent of Frank, Lloyd and Mabel because they belonged to type N and in a mating between Mr. X and Miss Y only MN children are possible. The remaining child was compatible with the above mating. Mr. Z on the other hand, could not be excluded as the father of any of the children because their blood types were all compatible with a mating between Mr. Z and Miss Y.

While blood tests are useful for the exclusion of paternity, they do not prove that a particular man is the father of a given child except in rare cases where the court is convinced that only two men cohabitated with the woman.[21]

In the thirty-nine years which have elapsed since the original discovery of the blood groups by Karl Landsteiner numerous investigators throughout the world have slowly amassed the data which comprises our present knowledge of human blood. This knowledge, in the hands of competent workers, has been applied in blood transfusions, anthropology, immunology, genetics, and is available as a dependable tool for the solution of certain of the medicolegal problems herein described. Wiener has calculated that almost 70 per cent of cases involving interchange of infants can be solved by utilizing blood tests. Furthermore, in cases of disputed paternity, exclusion by means of the four blood groups alone, is possible in 16 per cent of all cases. If factors M and N are included, the chances for exclusion are doubled. According to Wiener approximately 30 to 50 per cent of all defendants denying paternity are falsely accused. In New York City over 1,000 such cases are brought into court each year. In the Wayne County Circuit Court of Detroit the data obtained through the courtesy of Edward Pokorny, Friend of the Court, show a gradual increase in the number of cases of illegitimacy involving court orders for support from 143 in 1934, to 170 in 1936, to 243 in the first nine and a half months of 1938. The practical value of the evidence which blood tests can offer to the accused individual and to the community is apparent.

Although the medicolegal application of blood tests in European courts has received rather wide recognition, the legal profession in this country has been hesitant to accept the available scientific data as evidence. However, the attitude of the American courts is gradually changing. In his 1934 supplement on "Evidence" Professor Wigmore has included a discussion of the principles and genetics of blood groups.[22] He says, "At the hands of expert specialists—but of specialists only—the tests ought to be more widely known and used in this country, within the limited scope of their probative value." The medical profession is also beginning to recognize the significance of blood tests and in 1934 the section on forensic medicine of the American Medical Association passed the following motion unanimously:[17]

"Resolved that the session organize a committee for the purpose of acquainting the suitable authorities in the legal profession with the existence and reliability of the blood grouping tests, so that statutes may be enacted authorizing courts to order individuals to submit to blood grouping tests when they are required, in those jurisdictions in which blood tests are not obligatory at present."

As a result of the combined efforts of the legal and medical professions, very definite progress has been made in the last few years. In 1935 the New York State Legislature granted the courts power to request blood tests in cases of disputed paternity. In the same year the state of Wisconsin followed suit and at present a similar bill is pending in the New Jersey Legislature. The Wisconsin Law formulated by Dr. Levine and members of the faculty of the University of Wisconsin Law School, clearly states the essential features of the blood tests.[14] The persons involved shall "submit to one or more blood tests, to determine whether or not the defendent can be excluded as being the father of the child. The results of the test shall be receivable in evidence, but only in cases where definite exclusion is established." Similar legislation in the State of Michigan would be highly desirable and deserves the coöperation of the legal and medical professions.

Bibliography

1. Bernstein: Klin. Wchnschr., 3:1495, 1924.
2. Brines: Jour. A. M. A., 94:1114, 1930.
3. Decastello and Sturli: Münch. med. Woch., 49:1090, 1902.
4. Freeman and Whitehouse: Am. Jour. Med. Sci., 172: 664, 1926.
5. Haselhorst and Lauer: Z. Konstitutionslehre, 15:205, 1930; 16:227, 1931.
6. Kossovitch: Rev. Anthropol., 39:374, 1929.
7. Landsteiner: Wien. klin. Wchnschr., 14:1132, 1901.
8. Landsteiner: Zentralbl. f. Bakteriol., 27:361, 1900.
9. Landsteiner and Levine: Jour. Exp. Med., 47:757, 1928.
10. Landsteiner and Levine: Jour. Exp. Med., 48:731, 1928.
11. Landsteiner and Richter: Z. F. Medizinal. beamte., 16: 85, 1903.
12. Levine: Jour. A. M. A., 110:1243, 1938.

13. Levine: Jour. Lab. and Clin. Med., 20:785, 1935.
14. Levine: Jour. A.M.A., 105:1370, 1935.
15. Levine: Discussion for Dr. Wiener's remarks. Medical Times, April, 1938.
16. Levine and Mabee: Jour. Immunol., 8:425, 1923.
17. Minutes: Session on Forensic Medicine. Jour. A. M. A., 103:46, 1934.
18. Pemberton: Surg., Gyn. and Obstet., 28:568, 1924.
19. Tiber: Ann. Surg., 91:481, 1930.
20. von Dungern and Hirschfield: Z. F. Immunitatsforsch. u. exp. Therap., 6:284, 1910.
21. Wiener: Blood Groups and Blood Transfusion. Baltimore: C. C. Thomas, 1935.
22. Wigmore: Treatise on Evidence, 1923-1933. Supplement to 2nd edition, pps. 149-160, Boston, 1934.

LUMINAL AND POSTOPERATIVE TEMPERATURE*

B. F. GARIEPY, M.D.
ROYAL OAK, MICHIGAN

The pre-operative use of luminal to produce semi-anesthesia has been described previously.[2] It has been noted that some patients have a fever before operation and that they may develop a postoperative temperature elevation from slight pulmonary complications regardless of the anesthetic[1,3,4] agent. This analysis of 132 operative cases, some with and some without preoperative luminal, was undertaken to determine whether luminal influences the postoperative temperature.

The patients ranged from seven to seventy-one years in age; one-half of the cases were between the ages of twenty and fifty years.

Of the 132 patients twenty-six had appendectomy, twenty-four hernioplasty, eleven cholecystectomy, seven thyroidectomy, and five radical amputation of the breast; other operations included gastro-enterostomy, relief of intestinal obstruction, amputation of an extremity, nephrectomy, colostomy, hysterectomy, and abdominal-perineal resection of the rectum.

The operations were performed under local nitrous-oxide ether, drop ether, spinal, avertin, or colonic ether anesthesia.

No case was included in which there was clinical evidence of septic fever, either before or after operation.

Twenty-five patients received luminal on the evening before operation, the dose varying from 1½ to 4 grains. These twenty-five patients, with thirty-one others, a group totaling sixty-six, received luminal on the morning of operation. The quantity of luminal administered was 10 gr. in three patients, 9 gr. in three, 8 gr. in nineteen, 7 gr. in seven, 6 gr. in twenty-four, 4 gr. in seven, and less than 4 gr. in three patients. This group was compared with another group of sixty-six patients who received no luminal whatever. Morphine or pantopon and atropine were given to patients in the two groups in approximately the same amounts.

Each curve in Figure 1 represents the average maximum oral temperature of the

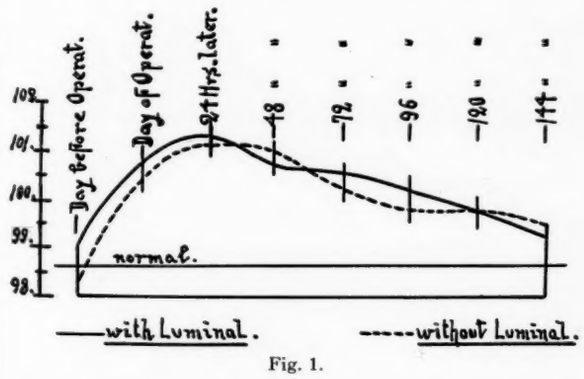


Fig. 1.

sixty-six patients in that group. Of the six patients exhibiting high peaks in temperature only two had received luminal, and the two cases showing the highest elevation were in the group receiving no luminal. No fatal hyperpyrexia occurred in either group.

Conclusion.—In the 132 cases studied, there was no indication that luminal predisposes to abnormal elevations of temperature following its use.

References

1. Arnheim, E. E., and Mage, S.: Ann. Surg., 93:929, 1931.
2. Bartlett, W., and Bartlett, W., Jr.: Surg., Gynec. and Obst., 51:217, 1930.
3. McKittrick, L. S., McClure, W. L., and Sweet, R. H.: Surg., Gynec. and Obst., 52:898, 1931.
4. Mandl, F.: Deutsche Ztschr. f. Chir., 165:67, 1921.

*From the Department of Surgery, Medical Branch, University of Texas, Galveston.

REPORT OF AN ISOLATED CASE OF PARATYPHOID B

F. L. GRAUBNER, M.D.
MARSHALL, MICHIGAN

The following case is reported for two reasons: First, because this rather rare condition is becoming more common, as evidenced by uncompiled statistics for this year; second, because a thorough search by the local health department could find no trace of its origin, either by contamination or the carrier route.

G. T., a white, American, single man, aged twenty-four, presented himself on June 8, 1939, complaining of diarrhea and biliousness. Examination was rather cursory and patient was given medication to alleviate the diarrhea. On the following day, the patient was seen in the home and examination revealed a flushed individual with a temperature of 103[40], complaining of severe headache and backache. His pulse was sixty per minute. The blood count showed a leukopenia of 4,700 wbc's with a preponderance of lymphocytes. Blood culture subsequently proved the invading organism to be bacillus paratyphosis, and not the suspected typhoid bacillus. At the end of the fifteenth day the temperature was normal and the patient unknowingly got up out of bed. His temperature immediately rose to 104[40] and persisted at a high level for three more weeks and gradually became normal on July 22. Stool cultures had to be repeated for three more weeks before three consecutive negative stools could be obtained for release from quarrantine.

There were no complications and the patient has now established a normal convalescence.

THE RÔLE OF ALLERGY IN SOME OF THE DERMATOSES OF QUESTIONABLE ETIOLOGY

HARTHER L. KEIM, M.D.
DETROIT, MICHIGAN

In 1923 the title of the chairman's address before the Section of Dermatology and Syphilology of the American Medical Association was "Etiology Unknown." Haase[7] reminded us that since the discovery of bacteria, fungi and protozoa, dermatology as well as other branches of medicine, had made enormous advances in the study of disease causation. He further recalled that unfortunately dermatological practice for the most part does not concern itself with the so-called infectious conditions, but the much larger group of non-infectious dermatoses. Haase's remarks with but few exceptions are equally pertinent today and we are still forced to admit that the etiology of most of our common skin diseases remains as obscure as when he coined the phrase "Etiology Unknown."

During the intervening thirteen years certain fundamental facts have come to light, which have materially enlarged our concept of these cutaneous syndromes. Unhappily, however, a complete understanding of their pathogenesis remains as elusive as ever. In view of the welcome assistance, during recent years, that the study of allergy has lent to the fuller understanding of numerous dermatological problems, it was deemed advisable, in such a symposium, to inquire into the rôle of allergy in some of the dermatoses whose etiology is still obscure.

We shall not especially concern ourselves with the three general types of allergy, the application of which has contributed so generously to recent dermatological progress. We refer to:

1. Familial allergy (hay fever-asthma group) represented by the now well known atopic eczema.
2. Epidermal allergy or contact dermatitis, a form of allergy that is not familial and affects only the skin.
3. Cutaneous manifestations of infectious allergy (type of tuberculin sensitiveness).

These types of allergic response, together with sensitivity to drugs, are discussed elsewhere in this symposium.

Let it be said at the outset that while an increasing interest by both the dermatologist and the allergist is evident in the pursuit of this problem, the proof of an allergic mechanism as the causative factor remains to be demonstrated. On the other hand evidence is accumulating to justify the assumption that in certain of the dermatoses of questionable etiology, specific allergens can in some cases be charged with cutaneous response.

Psoriasis

Not only because of its frequency, but more especially because of its baffling nature it was to be expected that the allergic mechanism of psoriasis should be investigated. Adamson,[1] in a recent contribution, states that psoriasis is a chronic skin disease of obscure etiology, but there is at least some evidence to support the theory that it is an allergic manifestation. He quotes Oriel and Barber's[8] work on the urinary proteose found by them in the urine of patients with allergic conditions and states that desensitization with various dilutions of this substance were of therapeutic value, and psoriasis is one of the conditions reported by them to have been successfully treated in this manner. However, Vaughan[12] and others have demonstrated that the causative allergen is not excreted, unchanged or slightly changed, through the kidneys as a proteose and therefore specific desentitization cannot be so accomplished. It would seem that their results in psoriasis were rather due to a non-specific effect as obtained with autohemotherapy. Zeidler[15] has noted that in patients suffering from pollen hay fever and psoriasis both conditions were frequently relieved by pollen therapy alone. He found that as pollen sensitivity decreased there was a comparable decrease in the activity of the psoriatic lesions. Likewise similar attempts at desensitization with scale extracts and other substances have failed to produce any conclusive evidence of a specific allergen in psoriasis.

Acne Vulgaris

Similarly, another commonly encountered cutaneous entity has been studied with reference to the allergic factor in its genesis. As perhaps was to be expected, the resultant opinions vary from Cunningham and Mendenhall's[4] report that "practically all patients with acne are sensitive to food proteins" through Vaughan's belief that "allergy plays a part in a certain proportion of cases of acne," to Sulzberger's[10] view that "foods are an insignificant factor in the production of the bulk of the cases of acne vulgaris." White[14] reported a series of thirty-two cases of recurrent papular and pustular acneform eruptions in which specific foods were found to be the cause. The six most common foods were chocolate, milk, wheat, oranges, tomatoes and nuts. Some presented multiple food sensitivity. White, however, refuses to classify these cases as acne vulgaris, in spite of the fact that the usual seborrheic areas were involved. There were no comedones, no seborrhea of the face or scalp and in addition all had failed to respond to the usual acne therapy, including x-rays. This is a group of cases which in my opinion are usually mistaken for acne vulgaris, but which most probably should be regarded as an acneform eruption due to sensitivity to foods, where the halogens can be excluded as a causative factor. In my experience they occur in an older age group, tend to persist for months or years and are satisfactorily amenable to an allergic avoidance diet.

True acne vulgaris, on the other hand, does seem to be the result of a dysfunction of the endocrine mechanism. Typical acne vulgaris does not occur before the first awakening of puberty and no eunuch or senile person has acne vulgaris. It is a disease which begins with and ceases after the sex life of the human being. Acne vulgaris is uniformly influenced by endocrine changes, such as menstruation, pregnancy, adrenal tumors and the like. Accordingly, the basic etiologic factors in true acne vulgaris should seemingly be sought in an endocrine dysfunction plus an increased irritability of the pilosebaceous organs, rather than in altered reactivity to one or more specific atopens.

Seborrhea

Seborrhea and its allies, seborrheic dermatitis and seborrheic alopecia have long been held to be due to basic factors similar to those at work in acne vulgaris. Seborrhea is actively influenced by psychical and sexual processes, probably through a hormonal mechanism, which apparently becomes most active at three distinct times during the life of the individual. Up to the age of five there is a marked tendency to seborrhea of the scalp. This often disappears after five to recur again at puberty. A third period of heightened function is associated with senile changes. It would seem, therefore, that these periods of activity are associated with endocrine stimulation and, as with acne vulgaris, until conclusive proof of a related allergic mechanism is at hand, we are on safer ground to regard seborrhea as an activation of the pilosebaceous apparatus through a hormonal mechanism.

Dermatitis Herpetiformis

The possibility of an allergic mechanism in dermatitis herpetiformis seems at the present time rather more plausible. It is an old observation that this condition is made worse by the ingestion of bromide or iodide. There are several instances on record where the administration of potassium iodide by mouth or subcutaneously actually seemed to have originated the disease. Likewise the external application of potassium iodide ointment will produce local reactions in a large percentage of patients suffering with dermatitis herpetiformis. Recent work of a number of investigators tends to confirm these observations. Recently, Merfert (quoted by Sulzberger)[11] studied 132 cases of typical dermatitis herpetiformis in which positive reactions to the external application of potassium bromide or potassium iodide were achieved in 86 per cent, while 27 cases of pemphigus were practically negative to the same tests. This demonstration of skin hypersensiveness to bromine and iodine together with the high eosinophilia often associated, does favor the basic allergic nature of dermatitis herpetiformis.

Also food sensitivity in dermatitis herpetiformis has recently been reported by Sammis,[12] wherein she referred to several other cases presumably on an allergic basis. Her patient, a woman, aged 33, with a strongly positive family history of allergy, developed a grouped multiforme eruption 36 hours after ingesting eggs, beef, cheese or fish. She was also sensitive to milk, strawberries, corn, alligator pear and gin. Allergic avoidance kept her free of lesions. Sulzberger[11] refers to a severe case of dermatitis herpetiformis in a nonatopic individual. In this case, also skin tests with common allergens, including foods, elicited numerous definite reactions of the urticarial type.

It would seem, accordingly, that specific hypersensitivity is a factor in some cases of dermatitis herpetiformis and that patients with this condition should be carefully studied with this possible etiology in mind.

Purpura

Another syndrome with cutaneous manifestations has recently been shown to follow the deliberate ingestion of food. Eyermann[6] reports 18 cases of purpura, five of whom had positive family history for allergy while ten gave positive skin tests (of which six indicated the offending food). Purpura more often followed the eating of egg, milk, wheat, chocolate, beef and the like, in that order of frequency. In most instances purpura of allergic origin due to food is identified by the occurrence of allergic phenomena in the antecedents, and in the patient by eosinophilia and positive skin tests. The accumulating evidence indicates that allergy will explain a great number of cases classified as Schönlein-Henock's purpura or the erythema group of diseases with visceral manifestations.

Lupus Erythematosus

The etiology of lupus erythematosus continues to remain obscure. The general character of the disease, its acute and chronic phases, centrifugal spread leaving behind a cicatricial atrophy, all suggest a local bacteria cause. The symmetry is indicative of the arrival of such bacteria from an internal source. The two bacteria that have been most under suspicion are the tubercle bacillus and the streptococcus. In neither case is the evidence at all conclusive.

That lupus erythematosus, especially the mild type, usually seen in young women, is more prevalent in recent years, is the experience of all clinicians in the larger centers of population. Engman[5] has recently called attention to this fact and speculated on the reasons therefor. This increased interest has led to further consideration of etiological evidence and some attention has, of course, been given to a possible allergic relationship. In view of the inability of various investigators to show either tubercle bacilli or streptococci in the lesions, some have regarded the lesions as an allergic response to a small number of organisms reaching the skin through the blood stream from a distant focus somewhat in the nature of a bacterid.

Anderson and Ayers[2] recently described a patient in whom an extensive example of lupus erythematosus, present thirteen years, disappeared completely in two weeks, after starting the diet of a well known food faddist! Presumably, the removal of a specific allergen was responsible for this remarkable change. In six other patients with erythematosus lupus or actinic dermatitis, four were immediately benefitted and two unchanged following a two weeks trial of this same diet. These authors call attention to similar results in erythematous lupus, with

other diets at the hands of a number of investigators.

It has long been known that lupus erythematosus is not only adversely affected by exposure to light, but that some cases precipitously follow overexposure to the sun's rays. Furthermore, treatment of the discoid type with heliotherapy, can promptly induce an acute disseminated erythematous lupus. Likewise, the number of erythematous lupus patients has been known to rise suddenly in March and reach its maximum in May and June. The nature of the toxin or possible allergen responsible for these changes is not, as yet, known.

Braithwaite,[3] in a recent study of pink disease (acrodynia), calls attention to the rôle of physical agents, particularly heat and sunlight. Serious sequelæ he finds can often be prevented in acrodynia by protecting the child from direct daylight. It has been shown that direct sunlight rapidly destroys washed red blood cells suspended in saline. Experimentally, Braithwaite ascertained that heat was the hemolytic factor. He suggests that pink disease is essentially an allergic reaction to heated (thus toxified) blood. Subcutaneous injections of hemolyzed citrated blood produced severe reactions in a child with pink disease and no reaction in controls. Such an hypothesis might conceivably apply to other light-sensitive conditions as lupus erythematosus, actinic dermatitis and hydroa estivale. Accordingly, if toxified blood could be shown to be the allergen, the etiology of light-sensitive dermatoses would be considerably clarified.

Similarly, other of the dermatological syndromes, such as lichen planus, acne rosacea, pemphigus and pityriasis rosea, have investigated for a possible allergic mechanism, but the available evidence up to the present time is insufficient to substantiate an allergic relationship.

Conclusions

1. An allergic mechanism has been demonstrated in certain cases of dermatitis herpetiformis, purpura and acneform eruption of the face.
2. The rôle of allergy in the etiology of psoriasis, acne vulgaris, seborrhea and lupus erythematosus has not been demonstrated.
3. Further investigative studies into the etiology of the common dermatoses of obscure causation should include the rôle played by allergy.

Bibliography

1. Adamson, W. B.: Jour. Allergy, 6:294, 1935.
2. Anderson, N. P., and Ayers, S., Jr.: Jour. A.M.A., 103: 1279, 1934.
3. Braithwaite, J. V.: Arch. Diseases of Childhood, 62:2, 1936.
4. Cunningham, T. D., and Mendenhall, J. C.: Jour. Allergy, 7:378, 1936.
5. Engman, M., Jr.: In publication read before the A.D.A., Swampscott, Mass., June, 1936.
6. Eyermann, C. H.: Southern Med. Jour., 28:341, 1935.
7. Haase, M.: Jour. A.M.A., 81:703, 1923.
8. Oriel, G. A., and Barber, H. W.: Lancet, 219:231, 1930.
9. Sammis, F. E.: Arch. Dermat. and Syph., 32:798, 1935.
10. Sulzberger, M.: Jour. Allergy, 7:380, 1936.
11. Sulzberger, M.: Jour. Allergy, 7:415, 1936.
12. Vaughan, W.: Allergy and Applied Immunology. St. Louis: C. V. Mosby Co.
13. Vaughan, W.: Jour. Allergy, 7:382, 1936.
14. White, C.: Jour. A.M.A., 103:1277, 1934.
15. Zeidler, R.: Abst. Jour. Allergy, 3:217, 1932.

FUNDAMENTALS OF TREATMENT IN GYNECOLOGY

HARRY M. KIRSCHBAUM, M.D.
DETROIT, MICHIGAN

The scope of treatment by the gynecologist has broadened so that he must relieve not only the three great symptoms of pain, bleeding and discharge, but he must also be familiar with the constitutional and endocrine factors involved in the prophylactic and medical care of the patient. It is not the purpose of this paper to delve too deeply into the scientific treatment but rather to present briefly some fundamental principles or methods in managing gynecologic conditions. Treatment, of course, depends on careful diagnosis, which means careful history, and careful examination.

The first glimpse of the patient takes in many factors such as age and appearance. In childhood we are confronted with:

1. Anomalies
2. Adhesions of the clitoris or labia
3. Neisser infection
4. Discharge without Neisser as foreign body
5. And rarely tumors of the genital organs.

The management:

1. Examine vagina with a small urethral speculum
2. Smears for Neisser and other bacteria
3. Adhesions are separated — Neisser treated by weak silver instillations
4. Theelin and corbus vaccine have not helped in my cases
5. Foreign bodies are removed

One may be confronted with endocrine such as this girl of eleven with breast secretion and marked sexual development for treatment. Careful endocrine studies and examination for tumor of the ovary revealed no unusual finding. There was no treatment.

Other patients present underdevelopment of the female sex characteristics, or thyroid or pituitary dyscrasias. The hypo-ovarian types show many types of symptoms, such as:

1. Amenorrhea
2. Dysmenorrhea
3. Discharge
4. Functional bleeding

By proper attention to this so called hypoplastic group with the use of those endocrines which stimulate the ovary, and with the occasional use of regulated pituitary x-ray, the ovarian function can be developed as a prophylactic for future dysmenorrhea, dyspareunia and sterility. Many patients of this type present themselves for treatment of sterility at 25 years of age, when the treatment should have been started at puberty. In difficult functional bleeding cases where curettage and suspension have been carried out without effect, I have had good results with the injection of lipiodol in the uterus. X-ray of the pituitary has been recommended for years, but the results are not always definite. Treatment with hormones, and x-ray of the spleen should also be tried. Wintz of Erlangen made it clear to me that there is never any stimulation of the ovary with x-ray treatment.

Thyroid and pituitary cases require adequate study and treatment. The fundamental point to be emphasized is that endocrine and constitutional factors must be recognized in childhood.

Vaginal Bleeding

Bleeding is the most alarming symptom to the patient and abortion perhaps the most frequent cause. In threatened abortion, gentle examination on the second visit, to be sure there is no retroversion, bed rest, morphine rectal suppository will usually stop the hemorrhage. There is no reason for ice bag, packing of vagina, or elevation of foot of bed, except in severe hemorrhage. Vitamin E and progestin have not done unusual things for my patients, but I will continue to try them in habitual abortion. In cases of abortion with bleeding and fever examine the patient vaginally, and if there is any tenderness outside the confines of the uterus do not curette. It is safe to curette if infection is in the products of conception. The curettage should be done only with sharp curettes. If bleeding is profuse ergotrate intravenously or packing of uterus with 2-inch bandage soaked in alcohol. The temperature may go to 102° F. with pack in cavity, but will disappear after removal of pack. Personally, I never irrigate the uterus with hot water. If peritonitis has developed the cul-de-sac may be drained. Parametritis is treated conservatively unless suppuration occurs. If thrombophlebitis occurs ligate the iliac veins and ovarian veins.

In hydatid mole the Friedman test is positive in dilution of 1 to 1000; however, if patient looks bad clinically do laparotomy, open uterus and if area is suspicious for chorioepithelioma, do hysterectomy.

An ectopic pregnancy may be diagnosed by the classic symptoms of skipped period, with stain and pain six days after; a decidual cast may deceive one into believing he is dealing with a simple abortion. Cul-de-sac puncture or colpotomy are of value for diagnosis. Percussion of the patient while standing up may show dullness in the lower abdomen due to blood accumulation. If the patient looks sick do not transfer to bed from ambulance but directly to operating table; open abdomen as soon as possible, and if pulseless massage heart. Don't wait for patient to come out of shock. Severe bleeding may also come from bleeding follicle or corpus luteum.

Other causes of bleeding include erosions, polyps, hyperplasia of endometrium, fibroids, inflammatory disease, adenomyosis, and malignancies of the Mullerian tract. In treating erosions of the cervix a biopsy, cautery or conization may be used only if there is no pelvic tenderness. The danger of cautery and more particularly conization

is stricture and hemorrhage. Hemorrhage may occur two weeks after conization and may be severe enough to endanger life. Pack vagina with bandages. It may be necessary to ligate cervical branches of uterine artery. Hyperplasia of endometrium requires curettage. At the menopause a D & C and 2400 mg. hours of radium may be used.

The treatment of fibromyomata in young adults raises the question of preserving the uterus. Myomectomy should be considered, x-ray therapy may be used, and has the following contraindications:

1. Uncertain diagnosis, may be ovarian cyst
2. Suspicion of malignancy in fundus—exploratory curettage. Avoid hysterectomy one week after curettage since the danger of infection is greater
3. Submucus fibroids
4. Fibroids and inflammatory disease
5. Fibroids reaching above umbilicus
1. Adenomyosis requires surgery
2. Endometriosis may be treated by radiation or surgery
3. Malignancy of the cervix and body of the uterus

•

The Chrobak test is valuable in servical malignancy. There is no substitute for conization, biopsy and currettage. Schiller test and colposcope still leave the diagnosis uncertain. The third stage of healing with epithelioid invasion requires careful microscopic examination in the differential diagnosis. If malignancy of the cervix is found one must make a cystoscopic and rectal examination. Cystoscopy may show bullous edema, striation, imminent perforation of the bladder or obstruction of the ureter. Rectal examination with two hands will disclose the status of the parametrium. These findings determine the operability according to Werthheim. If not operable radium may be used.

Carcinoma of the fundus is treated by total hysterectomy and without previous radiation. The treatment with endocrines has become so popular that three cases of carcinoma of the fundus have come under my observation which were treated with endocrines without curettage. It is absolutely essential to have a diagnostic curettage before treatment. In advanced carcinoma, 0.5 c.c. of 95 per cent, or a larger amount of a dilute solution of alcohol may be injected into the spinal canal. For profuse and foul discharge from the vagina in late malignancy, a powder of half and half iodoform and charcoal packed into the vagina will remove the unpleasant odor and make the patient comfortable.

Pain in Gynecology

1. Dyspareunia:
   (a) Incise perineum in midline under local or general with the index finger in the rectum. The patient must then be assured during repeated visits
2. Dysmenorrhea:
   (a) Atropine best medical treatment
   (b) Results with emmenin have not been as good in my cases as reports would indicate; may need larger doses
   (c) D & C and stem pessary for three months
   (d) Resection of the presacral nerves
3. Pelvic Inflammatory Disease:
   (a) Neisser
   (b) Postabortive or Puerperal
   (c) Bowel and Appendix
   (d) Tuberculosis
   (e) Rare cases, as stem pessaries

In infections arising after delivery or abortion, the temperature begins on the fourth day in puerperal infections; on the eighth day in Neisserian; and on the eleventh day in phlebitis or breast infections. Acute pelvic inflammatory disease is treated conservatively. Subacute and chronic pelvic inflammatory disease may be treated with tampons and milk injections. Elliott treatment has helped in many cases but my results have not been quite as regular as some of the reports. It has been advocated after operation and in sepsis. It is a logical and good method but not a panacea. Recent reports indicate that the fever therapy for this condition is losing ground. Tuberculous pelvic inflammatory disease is treated by an exploratory laparotomy, and then x-ray treatment. In the diagnosis of pelvic abscess examine with one finger in rectum, and in vagina. If there is high temperature tenesmus, mucus discharge and paresis sphincter ani, drain the abscess because perforation of the rectum is imminent. In Dupuytren's abscess, drain from the inguinal

region into the vagina. Pain from a stricture of the ureter may be confused with tubal pain. Catheterization of the ureter will relieve the symptoms.

Fibroids only cause pain during pregnancy, degeneration and infection. Surgery is the only adequate treatment. If the fibroid is intraligamentary, always catheterize the ureter before operation. In cases of ovarian cyst, the operator cannot distinguish the degree of malignancy. In malignancy the entire mass should be removed, and followed with x-ray therapy since the ovarian tumors are sensitive to x-ray.

Malpositions—Retroversion of Uterus

1. Conservative treatment:
   (a) 20 per cent congenital—replace with Kustner method
   (b) Pessary treatment — Hodge or Smith
   (c) Mercury bag in adherent retroversion or pregnancy
2. Operative Treatment for:
   (a) Sterility
   (b) Nervous symptoms
   (c) Pain
   (d) Excessive bleeding
3. Methods—Operative:
   (a) Vaginal suspension
   (b) Abdominal suspension

Discharge

The causes of discharge are: 1. X-ray. 2. Grave's disease. 3. Severe tuberculosis. In young girls, as a rule, it is not Neisserian infection, but rather an expression of disturbance of ovarian function. In puberty the discharge consists of epithelial cells and few Döderlein bacilli. In climacteric no Döderlein bacilli are found. The discharge is usually due to a hypo-ovarian secretion. The glycogen in vaginal wall epithelium depends on ovarian function. This glycogen is changed into lactic acid. Döderlein can only live in an acid media, not in a neutral or alkaline media. If one tests the acidity of the vagina after using K. Y. jelly, on the speculum, it will always be acid because the K. Y. jelly gives an acid reaction.

Every discharge should have three examinations:

1. For gonococcus—Gram stain of smears
   (a) From urethra
   (b) Meati Bartholin glands
   (c) From cervix
2. Wash for trichomonas
   Warm saline wash and specimen examined fresh. Stain for trichomonas
3. For monilia
   (a) 10 per cent sodium hydroxide on smear
   (b) Gram stain
   (c) Loeffler's methylene blue stain
   (d) Culture

Many authors state that discharge is characteristic, foamy for trichomonas and cheesy yellow for monilia. However, I have been mistaken so many times that I feel the tests should be made as a routine, for Neisser topical applications with silver preparations and douches for cleanliness have in my hands been as satisfactory as corbus vaccine. Occasionally vaccines and foreign protein have been found helpful in an associated arthritis or pelvic inflammatory disease.

For trichomonas all authors report 80 per cent good results. There are many recurrences. The husband should be checked for trichomonas. I never scrub the vagina with green soap. A 10 per cent solution of arsenical in glycerine with a teaspoon of lactic acid to 1 quart of lukewarm water as a douche has been as effective as any. Other treatments used are: (1) Lassar's paste, (2) devegan, (3) picric acid treatment, (4) the quinine preparations, (5) the Shelanski treatment of silver picrate, (6) concentrated salt solution, (7) the lactic—citric acid tablets of Brunswick Medical Company of Chicago in which an attempt is made to restore the Döderlein bacillus to power has been advanced as a new treatment.

However, these treatments are worth while, remembering that all authors with various forms of treatment give 80 per cent result in their conclusions. The monilia responds well to local application—gentian violet 1 per cent.

Hesseltine, in the *Journal of the American Medical Association* showed that soda douches improved the results in monilia, but in my own experience douching is not at all necessary and alkaline douches added nothing. In personal conversation with Hesseltine he informed me that further study did not bear out the original studies of the value of alkaline douches. If monilia are present during pregnancy, watch for thrush in the baby. Clinically, I have found a definite association of monilia in vagina to thrush in the baby.

Finding these tests negative and no other

lesions of the cervix to suggest erosion, malignancy or tuberculosis, one reviews the patient for endocrine etiology. During pregnancy some ovarian functions are depressed and we may find a purulent discharge associated with a granular appearing vaginal vault. This may be due to Neisser infection or have an endocrine basis. If it is observed during delivery the patient should be watched for postpartum infection. If endocrine, it is cured by lactic acid douches and during pregnancy requires two weeks of treatment. The condition is colpitis granularis. Colpitis senilis produces a yellow discharge, with an atrophic vaginal wall, with hemorrhages. This is also due to lack of ovarian function. Treatment consists of ovarian injection and swabbing the vagina with iodine. No douches are used. Colpitis emphysematosis (foamy discharge) requires no special treatment.

Sterility

A systematic review of all the factors is required. Careful sperm studies (Moench), and certainty that the sperm reach high in the canal (Hunner tests).

Inflation, salpingography, and pnuemosalpingography. The inflation should be done five days after the period with CO_2 gas with a long cannula. Graphs may be made to show tubal spasms or adhesions. The Leff stethoscope can be used to listen over the abdomen and the Momberg cannula with the long tip insures passing any obstruction that may be present at the internal os.

(1) General examination of the male and female

(2) Metabolism studies of the male and female

(3) Vitamin E diet has not been very helpful

(4) Curettage

(5) Repeated sounding

(6) Endocrine therapy

(7) Artificial insemination may be necessary

(8) Pituitary x-ray

(9) Suspension

(10) Salpingostomy and tubal implantation are valuable. The results are not always as promising as one would hope for. After salpingostomy, inflation should be done in five days.

(11) Pituitary x-ray in normal couples where everything done so far has not been effective.

(12) Hormone studies in females of couples where everything that was reviewed gave little help as far as producing results was concerned.

Birth Control

1. Rhythm method; have had several doctors' relatives carefully instructed in this method, in whom pregnancy occurred.

2. Diaphragm and jelly are very effective.

3. Gomco ring is dangerous and may penetrate the uterus and pregnancy may occur.

4. McCormick pessary-glycerine balloon on pessary, which c'oses the cervix and requires removal by the physician every month or two, has not been sufficiently tried.

In the menopause symptoms of frequency of urination, discharge are vaso-motor phenomena. Endocrine therapy and pituitary x-ray have been used with advantage. While this brief summary of the fundamentals in the treatment may have omitted some favorite treatment of an individual, I hope it will serve as a practical aid in ordinary gynecologic treatment.

THE JOURNAL

OF THE

Michigan State Medical Society

PUBLICATION COMMITTEE

A. S. BRUNK, M.D., *Chairman*.....Detroit
F. T. ANDREWS, M.D.....Kalamazoo
T. E. DEGURSE, M.D.....Marine City
ROY H. HOLMES, M.D.....Muskegon
J. EARL McINTYRE, M.D.....Lansing

Editor
J. H. DEMPSTER, M.A., M.D.
5761 Stanton Avenue, Detroit, Michigan

Secretary and Business Manager of The Journal
L. FERNALD FOSTER, M.D.
Bay City, Michigan

Executive Secretary
WM. J. BURNS, LL.B.
2642 University Avenue, St. Paul, Minnesota
or
2020 Olds Tower, Lansing, Michigan

OCTOBER, 1939

"Every man owes some of his time to the upbuilding of the profession to which he belongs."

—THEODORE ROOSEVELT.

EDITORIAL

MENTAL AND PHYSICAL HEALTH

In the Andrew P. Biddle lecture before the seventy-fourth annual meeting of the Michigan State Medical Society, Dr. Rock Sleyster, president of the American Medical Association, emphasizes the importance of attention to mental as well as physical health, on the part of physicians. He defines "mental health" in a broad way, to include "thinking which adjusts the individual and collectively the people to conditions in such a manner as to in the end promote progress, security, morals, health, happiness, independence and self expression." "I include under 'mental health,'" says he, "the possession of those attributes on which the advancement of civilization has so largely depended—such qualities as character, honesty, ideals, morals, industry, unselfishness and good citizenship."

A great deal has taken place in the past decade to undermine mental health so conceived. Much of the condition in which the world (or if we may narrow it down to our own country) finds itself may be attributed to the depression, or, as Dr. Sleyster takes as his theme, What Price Depression? The late James Harvey Robinson in a book of permanent value, *The Mind in the Making,* quotes an old Stoic proverb to the effect that "Men are tormented by the opinions they have of things rather than by things themselves." Emerson once said, "Things are in the saddle and they ride mankind." Mental health, then, can prevail only when we are in a condition of harmonious adjustment to our environment, when we can rise above and prove superior to the "things" that trouble us. Most of us never had that entity we call economic or social security. In our earlier years, we never gave it a thought. Why worry about it now? This does not mean to trust to the charity and good offices of others. Our fathers did not do much worrying. They worked hard and lived contentedly with less. They sought

"To catch Dame Fortune's golden smile,
Assiduous wait upon her;
And gather gear by ev'ry wile
That's justified by honor:
Not for to hide it in a hedge,
Nor for a train-attendant;
But for the glorious privilege
Of being independent."

However, what has the physician to do with all this? It is the physician in general practice (not the psychiatrist) who is consulted by patients, many in whom he can discover no organic basis for their symptoms. How often are such patients brushed aside with the statement that it is nothing but nerves. This class of patient usually drifts to the irregular or to mental healers, where the patient often reports that he has been cured. The average physician feels that the specialty of neurology and psychiatry is so technical and so far beyond him that he has no disposition to do anything about it, and so his nervous patients drift. Some authorities maintain that in approximately one-third of all cases seeking medical aid, there is a psychogenic factor that must be recognized in planning treatment. How important there-

fore that the general practitioner have a working knowledge of psychotherapy. He need not be a specialist. His whole relation to his patient, however, should be one of stimulating hope. He should be able to dispel or to minimize any fears with which the patient may be obsessed.

MICHIGAN PIONEER IN THE USE OF IODIZED SALT

This journal has received a lengthy communication on the subject of iodized salt in the prevention of simple goiter. The contribution comes from the Department of Pediatrics and Infectious Diseases of the University of Michigan Medical School. The movement for the employment of iodized salt began in this state, where it was sponsored by the Michigan State Medical Society at the inaugural meeting of the pediatric section in June, 1922. An advisory committee of five members was appointed with Dr. D. M. Cowie as chairman. The advisory committee met in January, 1923, to outline the studies for the first year's work. At this meeting the advisability of using small amounts of sodium iodide in table salt was suggested by Chairman Cowie. By December 14, 1923, samples of iodized salt were presented to the Committee, which proved 1/100 per cent of sodium iodide added to table salt was barely detectable to the taste and when 1/200 per cent was added, it could not be detected at all. On March 7, 1924, a joint meeting of the committee with the Michigan Salt Producers Association was held at which the interest and cooperation of the salt manufacturers were assured. A vote of approval was given the advisory board and a certificate was issued by the Michigan State Medical Society to the salt manufacturers endorsing the iodized salt. The date was March 17, 1924. The certificate read as follows:

"This salt contains .01 per cent sodium iodide, the amount approved by the Council and advocated by the Pediatric Section of the Michigan State Medical Society as a preventive of goiter. Individuals using this salt must not take other preparations of iodine without the advice of their physician. To be effective, this salt must be used for cooking as well as for table use. (Signed) The Committee."

It was found that 2 or 3 milligrams of sodium iodide per week will prevent goiter and 10 milligrams a week were found to do no harm. By May, 1924, an extensive educational program by means of public lectures and press was prepared for the people of Michigan. Since this time the use of sodium iodide in table salt has been subject to extensive controversy concerning its merits and demerits. Among the arguments against its universal use was the contention that some soils contained sufficient iodine, particularly those areas where goiter showed no prevalence, that to add iodized salt would produce a thyrotoxicosis or hyperthyroidism. Others wrote of endemic goiter in places where sea salt was rich in iodine. Yet others reported the absence of goiter in districts where the soil contained no iodine.

Dr. Harry A. Towsley has summarized the literature on the use of iodized salt for the iodized salt committee and has briefed the arguments for and against its use. A bibliography of sixty numbers is presented.

Among those favoring the use of iodized salt are John Plummer, Booth, Higgins, Kimball, Fischler, McClendon, Marine and Cowie. Some of those advocating the use of iodized salt claim that those opposing its use have done so on insufficient evidence. Packages of salt sold in Michigan bear on the label a statement of composition.

CHINESE CHECKERS

Of course I wouldna play at cards,
  Nor would I waste my time at bridge,
Why, I would need 'bout seven guards
  Were I so silly to join such rage.

You have to rise ere breakfast time,
  You must not be at home at all,
You play and play till'st time to dine,
  And then your head aches and you stall.

Why should I—me—a he-man strong,
  A rugged friend of symphony,
I ne'er would leave the cultured throng
  To con o'er such simplicity.

But, oh! oh, oh, what's happened now—
  What's this I feel?—a foolish strain—
When I from silly things gave vow,
  A something strange swims through my brain;

I feel things queer, I want to rave,
  I feel I'll jump from bridge or boat,
A crazy game is what I crave,
  It's Chinese Checkers—they've got my goat!

WEELUM

Lecturer (in village hall): "Now you all know what a molecule is."

Chairman (interrupting): "Most of us do, but perhaps you had better explain for the benefit of those who have never been up in one."—*Medley*, London.

AUTUMN POSTGRADUATE COURSES

1939

UNIVERSITY OF MICHIGAN

The Department of Postgraduate Medicine of the University of Michigan Medical School, in conjunction with the Wayne University College of Medicine and the Michigan State Medical Society, announces the following postgraduate courses for the autumn, 1939:

1. EXTRAMURAL COURSE

The course will be given in the extramural teaching centers. It is divided into two parts, the first to be given in October, 1939, and the second in April, 1940. The subjects for the course in October are:

Principles in the care of the newborn and premature child.
Management of breech presentation.
Surgery in children.
Liver and gall bladder disease.
Late developments in the use of sulfapyridine, sulfanilamide and prontysil.
Differential diagnosis of pyuria.
Colitis. Types, diagnosis and management.
Heart failure. Its diagnosis and management, with charts illustrating effects of treatment.

Teaching Centers and Local Chairmen

Ann Arbor
Dr. Howard H. Cummings, Ann Arbor
Battle Creek-Kalamazoo, jointly
Dr. Wilfrid Haughey, Battle Creek
Dr. Keith F. Bennett, Kalamazoo
Flint
Dr. Frank E. Reeder, Flint
Grand Rapids
Dr. Vernor M. Moore, Grand Rapids
Lansing-Jackson, jointly
Dr. J. Earle McIntyre, Lansing
Dr. Theophile E. Schmidt, Jackson
Manistee-Traverse City-Cadillac-Petoskey, jointly
Dr. Harlen MacMullen, Manistee
Dr. Edw. F. Sladek, Traverse City
Dr. John F. Gruber, Cadillac
Dr. Gilbert Saltonstall, Charlevoix
Saginaw
Dr. Paul R. Urmston, Bay City
Dr. Oliver W. Lohr, Saginaw

2. DIAGNOSTIC ROENTGENOLOGY

October 30-November 4, The X-ray Diagnosis of Thoracic Diseases, University Hospital, Ann Arbor

This course, which devotes five days to the various aspects of chest diagnosis in which roentgenology plays a part, is intended to offer to the postgraduate student a well-rounded review of the entire subject. The general principles of radiological and fluoroscopic technic will be presented, although it is not intended that the course will provide technical experience. The importance of considering all of the situations which may be encountered unexpectedly is illustrated richly with examples from actual practice.

3. PSYCHIATRY

November 2 and 3, Neuropsychiatric Institute, Ann Arbor

This course is designed to aid the physician in general practice in the management of a difficult group of cases. Neuropsychiatric disorders, both functional and organic, including etiology, clinical manifestations and therapeutic methods, will be discussed. Problems incident to the administering of care of mental disease by the state and the responsibility of the community in mental hygiene will be considered. Ample clinical material is available and the various types of neuroses, the early manifestation of the major psychoses and the management of individual cases will be demonstrated.

4. DISEASES OF METABOLISM

December 11-16, University Hospital, Ann Arbor

The course is planned to acquaint the practitioner with the fundamental principles of metabolism and their application to the understanding and management of metabolic diseases. The phenomenal advances in biological chemistry and clinical investigation have gone far to explain a number of disease conditions which either have not been understood or for which there was no satisfactory treatment. These conditions include diabetes mellitus, nephritis and edema, obesity, the deficiency diseases, gout and dysfunctions of the parathyroid and the adrenal glands. The material will be presented by means of lectures, demonstrations and selected reading.

Announcement containing complete information about the teaching schedule is available upon request.

DEPARTMENT OF POSTGRADUATE MEDICINE
University of Michigan, Ann Arbor, Michigan

President's Page

COÖPERATION AND UNITY

IF YOU and I can take the above words as a slogan and conform our conduct to them, then and only then, will this next year be a truly successful year for the Michigan State Medical Society.

Before this appears you will have determined whether or not this is the opportune time to challenge the forces which advocate socialized medicine under bureaucratic control, by instituting a plan of our own contriving, designed to satisfy the needs of the low income group and, at the same time, maintain the doctor-patient relation and high professional standards. If you do so decide you have placed upon your executive officers the responsibility of a most difficult task.

But whether you do or not, a distressing European situation is bound to have its repercussions over here, and this next year is likely to be a crucial one for the Society. If we are to carry on successfully it can only be by the coöperation of every unit in the organization.

It is essential that every effort be made by this Society to effectually coöperate with all groups having objectives related to ours. Most important of all, we must stand together and present a united front to all forces both within and without organized medicine, which threaten the integrity of the profession.

Yours, most sincerely,

Burton R. Corbus

President, Michigan State Medical Society.

Department of Economics

L. Fernald Foster, M.D., Secretary

DISTRIBUTION AND SPECIALIZATION OF PHYSICIANS IN MICHIGAN

INFORMATION concerning the distribution of physicians recently prepared by the Directory Department of the American Medical Association throws considerable new light on the distribution of physicians in Michigan.

The total number of physicians in Michigan was found to be as follows:

In Private Practice	4,958
Internes and Residents	414
Hospital Service	308
Government Service	64
Not in Private Practice	205
Retired and not in Practice	193
Total—All Physicians	6,142

The classification "In Private Practice" includes the total number of physicians who provide medical services directly to patients either on a full-time or part-time basis. About 80% of the total number of physicians are engaged in the private practice of medicine in Michigan. For the United States as a whole, 81% of the total number of physicians are in private practice.

"Internes and Residents" include all physicians serving interneships and residencies in approved hospitals of all types.

The classification "Hospital Service" includes all physicians in hospitals, infirmaries, dispensaries, or teaching clinics. Physicians who are situated at government hospitals without any available indication as to type of their services are included in this classification rather than under "Government Service."

Physicians in "Government Service" include the commissioned officers of the United States Army, Navy, and Public Health Service; full-time officers of the Veterans' Administration; and medical officers of the Indian Field Service. Likewise, physicians with the Civilian Conservation Corp and physicians located at army posts or associated with the United States Government in departments, bureaus, and projects are included.

The two hundred five physicians "Not in Private Practice," include those who are engaged in work of a professional character, but not in providing medical services directly to patients. Represented here are the faculty members of medical schools, physicians engaged in research or post-graduate work, medical directors of insurance companies, those employed by industrial organizations, those who limit their practice to public health and those who are associated with the various city, county, or state governing bodies.

The classification "Retired and not in Practice" includes all physicians who are retired and those who are no longer in medical practice, such as physicians who practice pharmacy, dentistry, or other occupations exclusively. The relatively small number of such physicians is indicative of the strong desire of physicians to follow their chosen vocation, scarcely being willing to cease practice because of age or disability much less to take up some other occupation.

The question of the extent of specialization has been much discussed in recent years. Much of this discussion has been based on incorrect or incomplete information. The following table presents authoritative and up-to-date information concerning the type of practice engaged in by the physicians in Michigan:

DISTRIBUTION OF PHYSICIANS IN MICHIGAN ACCORDING TO TYPES OF PRACTICE

	1938		
Type of Practice	Limited Specialists	Special Attention	Total
S (Surgery)	208	391	599
OALR (Ophthalmology, Otology, Laryngology, Rhinology)	181	31	212
I* (Internal Medicine)	216	—	216
Pd. (Pediatrics)	89	72	161
Oph (Ophthalmology)	39	20	59
NP (Neurology and Psychiatry)	40	17	57
N (Neurology)	4	3	7
Bact (Bacteriology)	—	2	2
D (Dermatology)	36	10	46
Ob (Obstetrics)	4	101	105
G (Gynecology)	1	42	43
ObG (Obstetrics and Gynecology)	76	126	202
CP (Clinical Pathology)	7	2	9

*Source—Directory Department A.M.A.

ALR (Otology, Laryngology, Rhinology) ..	37	10	47
PH* (Public Health)..	44	—	44
U (Urology)	55	34	89
IndS (Industrial Surgery)	15	55	70
T (Tuberculosis)	24	14	38
Pr (Proctology)	14	20	34
R (Roentgenology, Radiology)	61	28	89
Or (Orthopædic Surgery)	23	11	34
Path (Pathology)	18	3	21
P (Psychiatry)	26	3	29
Anes (Anesthesia)	1	12	13
TOTAL SPECIALISTS	1,219	1,007	2,226
GP (General Practitoner)	—	—	3,723
TOTAL PHYSICIANS IN PRACTICE ...			5,949
Retired and not in Practice	—	—	193
TOTAL NUMBER OF PHYSICIANS IN MICHIGAN			6,142

Any classification of physicians according to specialty must lack accuracy because of the absence of clear definitions or standards for specialists. In the American Medical Directory, which is the primary source of information on the subject of specialization, the physicians classify themselves to a large extent.

The customary classifications are "Limited Specialists," which indicates that the physician devotes all of his practice solely to the particular specialty; "Special Attention," which indicates that the physician devotes a portion of his practice in the particular field of specialty—the extent of such specialization may vary all the way from mere wish or interest to an actual devotion of a portion of practice to the limited field with the intention of becoming a limited specialist; and "General Practitioner," indicating the physician who does not claim to be specializing in a particular field of medical practice.

The report of the Committee on the Survey of Medical Services and Health Agencies made to the House of Delegates of the Michigan State Medical Society in 1933 revealed that only about one-half of the physicians who listed themselves as limited specialists were so considered by the Public Relations Committee in their own locality. Likewise, less than one-fourth of the physicians who classified themselves as devoting special attention to certain types of practice were so considered by the local Public Relations Committee.

As shown in the foregoing table, only 1,219 physicians of the 5,949 in practice may be said to be specialists. In other words, about 20% of the physicians in practice in Michigan are specialists. Compared with a previous report, "Distribution of Physicians in the United States" prepared by the Bureau of Medical Economics of the American Medical Association, 16.4% of the physicians in Michigan were classified as specialists in 1931.

The 1,007 physicians who classified themselves as devoting special attention to particular types of practice should probably be considered as general practitioners so far as their services to the community are concerned.

Improved accuracy in the classification of specialists may be expected in the very near future because of the special examining boards in the various medical specialties. Certification by one of these boards, generally speaking, may be taken as a fair indication of the competence of the physician to claim that he is a specialist. As yet, however, the submission of an application to such examining boards is purely voluntary and cannot be accepted as the sole criterion of ability as a specialist. However, when the certification by the various boards of specialty is generally accepted as the measure of competence for limited specialization, it is conceivable that a much more accurate classification of physicians according to type of practice can be made.

No doubt the American Medical Directory will place more and more reliance on certification by specialty boards, so that at some future date only those physicians who give tangible evidence of specializing in a certain field of medical practice can classify themselves as specialists.

J. D. LAUX.

THANKS

The Council of the Michigan State Medical Society has placed a vote of thanks on its minutes to all who contributed to the extraordinary success of the 1939 M.S.M.S. Convention. The Council is grateful to the officers of the Society, the guest essayists,

the Grand Rapids Committee on Arrangements, the Daily Fellowship Committee, the monitors, the management of the hotels in Grand Rapids, the Grand Rapids Convention Bureau, the management of the Civic Auditorium, the Scientific and technical exhibitors, the efficient Press Relations Committee, Radio Station WOOD, the Woman's Auxiliary, the Section Officers, our friends who sponsored lectures, the management of Blythefield Country Club, and not the least to all the members who by the hundreds took time off from their busy practices to attend the 1939 Convention.

Thanks, again!

GOVERNOR'S PROCLAMATION

WHEREAS, more than 2,000 doctors of medicine will meet during the week of September 18-23, in Grand Rapids for the Annual Convention of the Michigan State Medical Society, and

WHEREAS, ways and means for a wider distribution of medical services of good quality will be planned by the Michigan medical profession during this week, with major attention devoted to a voluntary group medical care plan to provide medical services for our residents and their families, and

WHEREAS, it is of the utmost importance that the health and well-being of the people of Michigan be steadily improved by making available the excellent medical and health facilities of our state,

THEREFORE, I, Luren D. Dickinson, Governor of Michigan, designate the period of September 18-23 as

"Michigan Medical Service Week"

within this State and urge the people of Michigan, all agencies concerned with health, and all media of publication, including the newspapers, the radio and the motion picture industry, to support the medical service program developed by the medical profession of the State of Michigan for our people.

Given under my hand and the Great Seal of the State, this Eleventh day of September, in the Year of our Lord, One Thousand Nine Hundred and Thirty-Nine, and of the Commonwealth, the One Hundred Third.

LUREN D. DICKINSON,
Governor.

APPROVED PRODUCTS

TECHNICAL exhibits at Michigan State Medical Society conventions in every respect, must conform to the requirements of Councils and Committees of the American Medical Association. This is a definite rule for exhibitors at our State Society meetings. It results in a high-class, ethical show, at which are displayed only those pharmaceutical supplies and medical and surgical appurtenances which have been investigated and have official approval by American Medical Association Councils.

A number of firms, which are detailing Michigan physicians, have products which have not been presented to the American Medical Association for approval. A number of these firms have requested space in the Michigan State Medical Society Technical Exhibit, but have had to be refused. Physicians will help their patients, and their County and State Medical Societies, if they insist on purchasing only Council-approved products, and refer to the American Medical Association all firms which attempt to sell unapproved products.

DUES

SINCE we are so prone nowadays to consider our dues in terms of value received, it behooves doctors of medicine to take account of stock in their medical organization. Physicians, by virtue of their professional activities and contacts, are often forced to be "joiners" of various organizations. They are compelled, through civic-mindedness, to join Chambers of Commerce, Service and Luncheon Clubs and Fraternal and Social groups. In their desire to keep abreast of modern medical science and specialty advances, many physicians are members of special national and state medical organizations. All of these demand an appreciable outlay of funds as membership requirements.

These various organizations, to one or more of which nearly every physician at some time or other subscribes, play a very small and often no part whatever in maintaining the traditions of medical practice. They enhance to only a slight degree, the physician's personal success or his value to his community.

Only one organization serves intimately

the doctors of medicine in his state; only one organization maintains a personnel whose activities are devoted wholly to a protection of the physician's interests; an organization which is constantly alert to the intrusion of lay and political interests into the field of medical practice. This organization is the State Medical Society. Its whole endeavor is to enhance, for the practitioner, the science and practice of medicine in all their aspects.

Let us, therefore, compare our State Society dues with those of our other memberships. How do they compare in actual dollars and cents? How do they compare in terms of real value received? Doubtless such a comparison will call to our attention very vividly the fact that our State Society dues are really very moderate.

Such a thoughtful comparison may bring to our realization the fact that the one organization which is concerned with our interests is our own Michigan State Medical Society.

THINK BEFORE YOU SPEAK

DR. H. G. Stetson and Dr. John E. Moran of Greenfield, Massachusetts, have published the result of a survey in which a study was made of some 35,000 suits of alleged malpractice. It disclosed that 60 per cent of the suits were the result of inopportune remarks made by physicians because of their lack of knowledge concerning the facts or because of personal anomosity or jealousy; that 20 per cent resulted from counter suits; that 10 per cent were due to failure to use the x-ray; that the remaining 10 per cent were due to other causes, such as newspaper articles, cults, negligence of nurses or employees of physicians, alcoholism (rare), and failure to use a method of treatment which is used by the majority or a respectable minority (also rare). The report emphasized the belief that the prevention of suits is the best defense against them.—From Preface to "The Roentgenologist in Court," by C. W. Donaldson.

THE MICHIGAN STATE MEDICAL SOCIETY AND THE STATE HEALTH COUNCIL

On August 25, the council of the Michigan State Medical Society and the State Health Council met at Mackinac Island. This was the first meeting of these two groups. It brought together two outstanding agencies whose objectives are the same—agencies whose time is devoted to the development of the finest type of medical care in Michigan and the resulting good health of our citizens.

The meeting was devoted to an earnest expression of coöperative effort between the two groups. Dr. H. Allen Moyer, Commissioner of Health, sounded the keynote of coöperation. He was supported by Dr. Albert McCown, Deputy Commissioner of Health, Dr. Henry Luce, President of the Michigan State Medical Society, and Dr. Paul R. Urmston, Chairman of the Council.

With the rapid development of scientific medicine and the expansion of public health activities, it is obviously apparent that the welfare of our citizens can be served only by a sincere coöperative effort of organized medicine and public health agencies. The private practitioner of medicine has and always will be fundamental in the promulgation and administration of good public health principles. Only with sympathetic health officials and conscientious practitioners of medicine can the public health be effectively maintained—in Michigan we have both.

The Mackinac meeting marked a new era of cooperation between two groups whose objectives are the same and whose combined, consistent efforts bespeak a great forward step in Michigan's public health.

RADIOLOGISTS AND THE WAGNER BILL

(Journal American Medical Association)

Radiologists are especially interested in the feature of the Wagner bill which proposes the "construction of 500 diagnostic centers 'as an initial development' at a cost of $30,000 each. These would not only assist the state cancer hospital in cancer diagnosis and treatment but would also serve 'for diagnosis and therapy which would be beyond the resources that the local physicians of the neighborhood normally would have for equipment in their offices.' Thus provisions are made for about ten centers in each state to serve, presumably without charge and regardless of ability to pay, all citizens whose attending physician desires radiological or pathological procedures in diagnosis."

Mr. Mac F. Cahal, executive secretary of the Inter-Society Committee for Radiology, in the Special Bulletin from which the foregoing statements were quoted, further says:

"Is there any evidence whatever to justify the construction of 500 free diagnostic centers to duplicate existing facilities? There is no way of knowing the exact number of roentgen installations in this country today. We do know, however, that there are more than 2,000 radiological specialists equipped and trained to give diagnostic consultation. We do know that there are more than 6,000 hospitals having roentgen departments. And we do know that 98.5 per cent of the people residing within the United States live within 30 miles of a hospital. . . .

"If the Wagner bill becomes a law it will inevitably supplant competent private practitioners with salaried political appointees. Does the record of the federal state offer any indication that this system would result in anything but inferior service to the sick, rich and poor? Although the bill does not provide for compulsory health insurance, it opens, by means of governmental subsidies and consequent government control, an even more direct road to state medicine than would compulsory insurance."

MICHIGAN'S DEPARTMENT OF HEALTH

HENRY A. MOYER, M.D., Commissioner
LANSING, MICHIGAN

MACKINAC ISLAND CONFERENCE

Medicine and public health joined hands in seeking the mutual objective of making available the science of medicine to the people of Michigan at the third annual Mackinac Island Conference of public health workers held at the Grand Hotel August 25 and 26.

Coöperation, as the theme of the conference, was expressed in the joint meeting of the Council of the Michigan State Medical Society and the State Council of Health, the first time in history that these executive representatives of medicine and public health have met together. These groups met at a luncheon session on Friday, August 25, to discuss mutual policies and again at the banquet in the evening honoring Dr. H. Allen Moyer, State Health Commissioner. Preceding the dinner, a reception was held for Doctor and Mrs. Moyer.

Speaking at the evening banquet as toastmaster, Dr. Albert McCown, deputy state health commissioner, outlined the possibilities for great advances in promoting the health of the people through close collaboration of official health agencies and the practitioners of medicine. "Our objectives are the same, though our techniques may differ," he declared.

Dr. Henry Luce, president of the Michigan State Medical Society, responded for the medical profession. "We must forget our differences as groups and seriously consider what our public expects," he said. "The public expects service. We must extend to them the ultimate values of the science of medicine. We are the distributors of the science of medicine. United under the banners of the science of health and the science of medicine, we will go forward. This spirit must be carried on down through all counties and local units."

Dr. John L. Lavan, secretary of the State Council of Health, responded in the same tempo, assuring the conference of the coöperation of official health agencies in securing the mutual objectives of medicine and public health. Dr. Burton R. Corbus, president-elect of the State Medical Society, gave a brief review of the historic work of Dr. William Beaumont. In this he had an appropriate setting, for it was on Mackinac Island that Dr. Beaumont carried on his important experiments on Alexis St. Martin, the young French Canadian, which were to contribute so much to medicine's knowledge of the physiology of digestion.

Dr. Moyer, honor guest of the evening, paid tribute to the loyalty and efficiency of his staff in the Michigan Department of Health. Full coöperation of the Department would be forthcoming, he declared, in promoting and improving the public health of Michigan's people.

A roundtable session of public health personnel was held Saturday morning for the discussion of the state's poliomyelitis program. Dr. McCown acted as chairman. Speakers included Dr. Moyer, Dr. A. W. Newitt, director of the Bureau of Epidemiology, and Dr. Carl E. Badgley, president of the Michigan Orthopedic Society.

Arrangements for the Mackinac Island Conference were under the direction of Dr. Carleton Dean, director of District Health Department No. 3 and member of the State Council of Health.

GOITER PREVENTION PROGRAM

A state-wide educational program to promote the use of iodized salt as a preventive of simple goiter will be sponsored during the month of October by the Michigan Department of Health, the Iodized Salt Committee of the Michigan State Medical Society and the Salt Producers Association of Michigan.

The educational program will be carried on principally through the public schools with the approval and assistance of the State Department of Public Instruction. The Iodized Salt Committee and the Michigan Department of Health have prepared a four-page folder which will be distributed to parents through the more than a million children in Michigan's schools. The salt companies and the wholesale and retail grocers will also coöperate through their sales outlets in advertising and promoting the sales of iodized salt. The Salt Producers Association has provided part of the funds for the publication of literature which will be used in the educational program.

Health officers in areas having full time health departments will serve as clearing agencies for the local programs, securing the coöperation of school administrators in the distribution of literature. In counties annd cities having no full time health officer, the Michigan Department of Health will work directly through school commissioners and superintendents in securing the distribution of literature in the schools.

Coincident with the distribution of iodized salt literature, publicity will be released through the newspapers and periodicals of the state. Physicians, health officers and nurses who wish copies of the folder "Michigan Children Need Iodized Salt" for distribution may obtain them upon request to the Michigan Department of Health at Lansing.

NURSING INSTITUTES ON SYPHILIS CONTROL

The Bureau of Public Health Nursing, in coöperation with the Michigan State Nurses Association and the University of Michigan, is sponsoring a series of institutes for public health nurses on syphilis control. The institutes will be held at Marquette, September 26 and 27; at Bay City, September 29 and 30; and at Traverse City, October 3 and 4.

The institutes will consider the medical and public health aspects of syphilis control, the psychology of approach in the control of syphilis, and the function of the nurse in syphilis control. Speakers will include Dr. T. E. Gibson, director of the Venereal Disease Division of the Michigan Department of Health; Miss Ruth Kahl, R.N., regional public health nursing consultant for the U. S. Public Health Service; Dr. M. Cooperstock of the Northern Michigan Children's Clinic; and Dr. R. Dixon, venereal disease consultant for the Michigan Department of Health.

POLIOMYELITIS PEAK REACHED

Michigan's 1939 outbreak of poliomyelitis reached its peak the week ending August 26 when 114 cases of the disease were reported. Since that time case reports have dropped off rapidly, declining to 102 the week ending September 2 and to 62 the week ending Septemberf 9. It is expected that this declining trend will continue throughout September with the situation returning to normal by the end of the month.

A total of 555 cases of poliomyelitis has been reported during the 1939 outbreak through the week

ending September 9. During August, the high month of the outbreak, 392 cases were reported, exceeding the incidence of the disease during the same month of 1931 when the state's greatest outbreak occurred. In the 1931 outbreak September was the high month, 577 cases occurring during the month and 1,137 cases during the entire year.

Of the 482 cases of poliomyelitis reported during July and August this year, 326 occurred in Detroit. Wayne, Oakland and Saginaw counties have been hardest hit by the 1939 outbreak. A total of 34 counties, however, have reported one or more cases of the disease.

The Michigan Polimyelitis Commission, organized to provide consultant service in the diagnosis and orthopedic care of poliomyelitis cases, reports that between August 8 and September 9 this service has been provided in 122 cases. Of these, 91 were for diagnostic consultant service and 31 for orthopedic consultant service.

REGIONAL CONFERENCES OF HEALTH DEPARTMENTS

The first of the fall series of Regional Conferences of State and Local Health Departments was held at West Branch, September 8, with Dr. Sue Hurst Thompson, director of District Health Department No. 2, as host. Members of the staffs of Grand Traverse County Health Department and District Health Departments Nos. 1, 2, 3, and 4 were present.

The conference was devoted to discussion and correlation of state and local health services related to maternal and child health, public health dentistry and health education. The conference was under the direction of Dr. Albert McCown, deputy health commissioner in charge of local health service. Speakers included Dr. Lillian R. Smith, Dr. William R. Davis and Miss Marjorie Delevan.

Regional Group No. 2 including Isabella, Midland, Mecosta-Osceola, Bay, Wexford and District No. 7 health departments will meet at Midland for the second conference in the series. Muskegon, Mason, Sault Ste. Marie and Battle Creek will be centers for other forthcoming conferences.

RABIES QUARANTINES TERMINATED

Rabies quarantines still existing in five Michigan counties at the beginning of September will all be terminated by the first of October, according to the Michigan Department of Agriculture. Counties still having quarantines during September include Oakland, Berrien, Livingston, Saginaw and Huron. During the summer months while Michigan was experiencing the heaviest incidence of rabies in animals in recent years ten counties were under quarantine.

VAN BUREN COUNTY HEALTH OFFICER

Dr. Merle R. French, former health commissioner of Courtland County, New York, has been appointed as director of the Van Buren County Health Department. Dr. French's appointment became effective September 1. His headquarters will be at Paw Paw.

WATER PURIFICATION CONFERENCE

The Seventeenth Annual Michigan Water Purification was held in Lansing September 20 to 22 under the sponsorship of the Michigan Department of Health. Held in conjunction with this conference was the meeting of the Michigan Section of the American Water Works Association. These organizations have as their objective the improvement of public water supplies throughout the state.

EXHIBIT M.S.M.S. MEETING

The Michigan Department of Health sponsored an exhibit at the annual meeting of the Michigan State Medical Society in Grand Rapids September 19 to 22.

The exhibit featured the work of the Department in its investigations of pertussis immunization, epidemiological service in the control of smallpox and poliomyelitis, and its pneumonia serum program. The organization of county and district health departments throughout the state was also demonstrated. The work of the Department in coöperation with the State Stream Control Commission which has demonstrated the cause and methods of treatment for schistosome dermatitis with its survey party during the past summer was also shown. A service map indicated the extensive activities of the Department in the fields of maternal and child health.

Among Our Contributors

Dr. Arthur W. Frisch attended the University of Wisconsin from 1927 to 1937, during which time he received his A.B., M.D., and also Ph.D. in Medical Bacteriology. Since 1937, he has been Instructor in Medical Bacteriology and Clinical Pathology at the Wayne University College of Medicine under Dr. Harry L. Clark.

* * *

Dr. F. L. Graubner graduated from Wayne University College of Medicine, class of 1934. He was interne at Harper Hospital in 1935 and later on the staff at Oaklawn Hospital, Marshall, Michigan, and Leila Post Hospital, Battle Creek. He is now in general practice at Marshall, Michigan.

* * *

Dr. V. W. Jensen is a graduate of Illinois College, received his M.S. in 1917 from the University of Chicago, and M.D. from Rush Medical School in 1919. He served a year's internship at the St. Louis City Hospital and a year at Children's Memorial Hospital, Chicago. At the present, he is practicing at Shelby, Michigan.

* * *

Dr. Harold B. Rothbart was graduated from the University of Toronto Medical School in 1930. He is visiting Physician, Children's Hospital, Detroit, and Attention Pediatrician, Receiving and Mount Carmel Hospitals, Detroit. Dr. Rothbart is also Instructor in Clinical Pediatrics, Wayne University, and is a member of the American Board of Pediatrics. He is Former Senior Instructor in Pediatrics of the University of Michigan Medical School.

CORRESPONDENCE

July 26, 1939

Dr. L. Fernald Foster,
Secretary, Michigan State Medical Society,
Lansing, Michigan.
Dear Doctor Foster:

The Federal Trade Commission has for some years been rather active in its efforts to protect the public against harmful and useless nostrums, and in connection with these activities has received aid from officers of constituent state and component county medical societies and from individual members of those societies who have appeared as witnesses before referees of the Federal Trade Commission for the purpose of testifying as to the lack of merit of such nostrums. You have no doubt heard from certain sources that the American Medical Association and its constituent state medical associations have failed to coöperate with the federal government, when as a matter of fact the Association has for many years done everything that it could do to be helpful to any agency of the federal government that has called on it for any assistance that the Association could render, and I have known many instances in which constituent state associations have taken advantage of opportunities that have offered to be helpful to the federal government.

Under the provisions of the new food and drug act certain important new duties have devolved on the Federal Trade Commission and apparently that agency is determined to discharge these duties as fully as possible. It is the intention of the officers and members of the administrative personnel of the American Medical Association to be as helpful as possible to the Federal Trade Commission in connection with this matter, and I bespeak the active assistance of the officers of the constituent state medical associations for the Federal Trade Commission in this connection.

While it is true that this Commission is not provided with funds that will enable the Commission to compensate fully physicians who appear as witnesses at hearings conducted in the several states, I am very *sure that the members of the medical profession generally will be glad to do what they can to assist the Commission in restraining violations of the laws pertaining to foods and drugs and to lessening of injurious effects of the production* and sale of worthless and harmful nostrums.

Dr. K. E. Miller, Senior Surgeon of the United States Public Health Service, has been detailed to the Federal Trade Commission for the purpose of assisting the Commission in its work pertaining to the matters referred to in this letter. I am very sure that Doctor Miller and the members of the Federal Trade Commission will be grateful for any coöperation that the secretaries of the constituent state medical associations will extend.

Very sincerely yours,

OLIN WEST, *Secretary*
American Medical Association.

INTERNATIONAL MEDICAL ASSEMBLY

Inter-State Postgraduate Medical Association of North America

Palmer House, Chicago, Illinois — OCTOBER 30, 31, NOVEMBER 1, 2, 3, 1939

Pre-Assembly Clinics, October 28; Post-Assembly Clinics, November 4, Chicago Hospitals

President, Dr. George W. Crile; President-Elect, Dr. Chevalier Jackson; Chairman Program Committee, Dr. George W. Crile; Managing Director, Dr. William B. Peck; Secretary, Dr. Tom B. Throckmorton; Director of Exhibits, Dr. Arthur G. Sullivan; Treasurer and Director of Foundation Fund, Dr. Henry G. Langworthy; Chairman, Chicago Committees, Dr. Robert H. Hayes

ALL MEDICAL MEN AND WOMEN IN GOOD STANDING CORDIALLY INVITED

Intensive Clinical and Didactic Program by World Authorities
The following is the list of members of the profession who will take part on the program:

Irvin Abell, Louisville, Ky.
Alfred W. Adson, Rochester, Minn.
John Alexander, Ann Arbor, Mich.
Walter C. Alvarez, Rochester, Minn.
Charles R. Austrian, Baltimore, Md.
W. Wayne Babcock, Philadelphia, Pa.
James H. Black, Dallas, Texas
Robert A. Black, Chicago, Ill.
Ralph C. Brown, Chicago, Ill.
Richard B. Cattell, Boston, Mass.
James C. Carr, Chicago, Ill.
Russell L. Cecil, New York, N. Y.
Warren W. Cole, Chicago, Ill.
C. Donald Creevy, Minneapolis, Minn.
George W. Crile, Cleveland, Ohio
William R. Cubbins, Chicago, Ill.
Elliott C. Cutler, Boston, Mass.
Walter E. Dandy, Baltimore, Md.
Loyal Davis, Chicago, Ill.
Joseph B. DeLee, Chicago, Ill.
Claude F. Dixon, Rochester, Minn.
Nicholson J. Eastman, Baltimore, Md.
Eldridge L. Eliason, Philadelphia, Pa.
John F. Erdmann, New York, N. Y.
Frederick H. Falls, Chicago, Ill.
Reginald Fitz, Boston, Mass.
John R. Fraser, Montreal, Canada
Alvah H. Gordon, Montreal, Canada
Evarts A. Graham, St. Louis, Mo.
Howard K. Gray, Rochester, Minn.
Donald Guthrie, Sayre, Pa.
Russell L. Haden, Cleveland, Ohio
William D. Haggard, Nashville, Tenn.
Verne C. Hunt, Los Angeles, Calif.
Andrew C. Ivy, Chicago, Ill.
Elliott P. Joslin, Boston, Mass.
Robert W. Keeton, Chicago, Ill.
William J. Kerr, San Francisco, Calif.
Herman L. Kretschmer, Chicago, Ill.
Frank H. Lahey, Boston, Mass.
Philip Lewin, Chicago, Ill.
William E. Lower, Cleveland, Ohio
Drew W. Luten, St. Louis, Mo.
James C. Magee, Washington, D. C.
Ross T. McIntire, Washington, D. C.
James S. McLester, Birmingham, Ala.
Harry Mock, Chicago, Ill.
Emanuele Momigliano, Rome, Italy
John J. Moorhead, New York, N. Y.
George P. Muller, Philadelphia, Pa.
John H. Musser, New Orleans, La.
Emil Novak, Baltimore, Md.
Alton Ochsner, New Orleans, La.
Eric Oldberg, Chicago, Ill.
Thomas G. Orr, Kansas City, Mo.
James E. Paullin, Atlanta, Ga.
Dallas B. Phemister, Chicago, Ill.
Charles H. Phifer, Chicago, Ill.
Fred W. Rankin, Lexington, Ky.
William F. Rienhoff, Baltimore, Md.
Thomas M. Rivers, New York, N. Y.
Albert D. Ruedemann, Cleveland, Ohio
Roy W. Scott, Cleveland, Ohio
Francis E. Senear, Chicago, Ill.
Elmer L. Sevringhaus, Madison, Wis.
Gerald S. Shibley, Cleveland, Ohio
Harry P. Smith, Iowa City, Iowa
Albert M. Snell, Rochester, Minn.
Tom D. Spies, Cincinnati, Ohio
Cyrus C. Sturgis, Ann Arbor, Mich.
Walter Timme, New York, N. Y.
John A. Toomey, Cleveland, Ohio
Waltman Walters, Rochester, Minn.
Soma Weiss, Boston, Mass.
Harold G. Wolff, New York, N. Y.
Wallace M. Yater, Washington, D. C.
Hugh H. Young, Baltimore, Md.
Italo F. Volini, Chicago, Ill.

Hotel Headquarters
PALMER HOUSE

HOTEL RESERVATIONS

Hotel Committee, Dr. J. P. O'Neil, Chairman, 30 N. Michigan Ave., Chicago, Ill.

A program has been mailed to every member of the medical profession in good standing in the United States and Canada.

Any member of the profession in good standing who has not received a program please write the Managing Director at once and a copy will be mailed.

Comprehensive Scientific and Technical Exhibit. Special Entertainment for the Ladies.

General News and Announcements

The annual meeting of the American Academy of Ophthalmology and Otolaryngology will be held in Chicago, October 8 to 13, at the Palmer House.

* * *

Lowell S. Selling, M.D., Detroit, is author of an original article which appeared in the *Journal* of the A.M.A., September 9 issue, entitled "Abnormalities of the Eye in Traffic Court Cases."

* * *

"Regulations for the Control of Communicable Diseases," a 36-page booklet published by the Michigan Department of Health, is available upon request. Write the State Health Commissioner at Lansing, Michigan.

* * *

Members of the State Society will do THE JOURNAL mailing department a great service by advising of changes of address promptly. Otherwise, THE JOURNAL may be discontinued, since the Post Office will report back "No longer there."

* * *

The sympathy of the medical profession is extended to Dr. Clarence A. Kretzschmar, Detroit, in the death of his wife. Mrs. Helen Kretzschmar was drowned when she fell off a boat at the Detroit Yacht Club on September 1, 1939. Surviving are Dr. Kretzschmar and two children, John and Margaret.

* * *

Dr. Don Marshall, formerly assistant Professor of Ophthalmology at the University of Michigan and for the past two years head of the Department of Ophthalmology, Geisinger Hospital, Danville, Pennsylvania, has announced his association with Dr. E. P. Wilbur and Dr. R. B. Fast of Kalamazoo, in practice limited to diseases of the eye.

* * *

The Twelfth Graduate Fortnight of the New York Academy of Medicine will be devoted to "The Endocrine Glands and Their Disorders." The symposium will be held at the Academy of Medicine Building, 5th Avenue at 103rd Street, New York City, October 23 to November 3, 1939. Registration $5.00. Program on request.

* * *

Mrs. Emma Anderson, wife of Dr. William K. Anderson, Saginaw roentgenologist, died on August 17, 1939. She was an active member of the Woman's auxiliary of the Saginaw County Medical Society. She was born in 1898 and married Dr. Anderson in Flint in 1925. She is survived by her husband, five children, her mother, five brothers and two sisters.

* * *

Joint Meeting of the Advisory Council on Health and M.S.M.S. Council: At the invitation of the State Advisory Council of Health, members of The Council and officers of the Michigan State Medical Society held a joint session at Mackinac Island on August 25. Coöperative effort and joint projects were recommended and discussed at a luncheon meeting. A reception in honor of the new State Health Commissioner, H. Allen Moyer, M.D., was given by Henry A. Luce, M.D., President of the Michigan State Medical Society. This was followed by a dinner and evening meeting of the two groups and the health personnel of the Upper Peninsula and the upper portion of the Lower Peninsula of Michigan, numbering in excess of 200.

The Michigan Attorney General has ruled in a formal opinion that the new Welfare Laws require the State to match expenditures made by the counties not only for general relief, such as provision of food, fuel and shelter, but for medical services as well. The opinion said the law defines medical services as home or office attendance by a physician, dental, pharmaceutical services and besides nursing in the home. It does not include hospitalization.

* * *

Afflicted Child Commitments for the month of August, 1939: Total cases 436, of which 87 went to University Hospital and 349 to miscellaneous hospitals. Of the above, Wayne County sent 20 to University Hospital and 64 to miscellaneous hospitals, for a total of 84.

Crippled Child for August, 1939: Total cases 95, of which 20 went to University Hospital and 75 to miscellaneous hospitals. Of the above, Wayne County sent three to University Hospital and 47 to miscellaneous hospitals, for a total of 50.

* * *

The Social Security Act which was amended on August 10, 1939, contains several new provisions relative to Federal Old Age Insurance:

The tax rate continues to be 1 per cent during 1939, '40, '41 and '42.

Beginning in 1940, special refund will be made to *employees* of taxes which they pay on wages in excess of $3,000 received during a single calendar year from more than one employer. Wages received after attaining age 65 are taxed, retroactive to January 1, 1939; a receipt for the employee is to be furnished by the employer—a written statement showing the wages paid by the employer after December 1, 1939.

For additional information write Federal Old Age Insurance Manager, Lansing, Michigan, Field Office.

* * *

The Grand Rapids Committee on Arrangements for the 1939 M.S.M.S. Convention performed an extraordinary job of hospitality. A good slice of the success of the meeting is creditable to the efficient and ubiquitous performance of these committee members: Drs. G. Howard Southwick, Chairman; Don B. Cameron, Wm. J. Butler, R. H. Denham, Torrance Reed, Ray Van Bree, Wm. A. Hyland, N. S. Vann, A. B. Smith, A. R. Woodburne, R. DeMol, Don Flynn, Chas. H. Frantz, Jack Hoogerhyde, and R. C. Breece.

The Grand Rapids physicians who served on the Daily Fellowship Committee were: Drs. Frank Boet, J. D. Brook, M. B. Tidey, W. B. Mitchell, Lynn Ferguson, Charles V. Crane, A. V. Wenger and J. C. Foshee.

The monitors were: Drs. V. Stover, H. VanBelois, M. Shellman, G. DeBoer, R. V. Allen, P. Northouse, J. Hoogerhyde, F. Brace, D. DeVries, M. Ballard, Carl Beeman, R. Eaton, J. DePree, G. Winter, J. W. Phillips, Gayle H. Mehney, L. C. Carpenter, Jr., F. A. Adams, Charles Bell, Jr., Henry W. Clapp, Wm. L. Bettison, L. Paul Ralph, Mark W. Dick, Jerome Webber, Ruth Herrick, A. R. Woodburne, H. M. Blackburn, and A. M. Moll.

Dr. M. B. Landers and his associates at the Lincoln Hospital, Detroit, have performed a valuable service in recently defending the prerogatives of recognized medical institutions to control the hospital service furnished patients. We refer to the case tried before the Honorable Judge John Maher in Recorders Court, which was another onslaught by sub-standard healers who, with everything to gain, again were trying to better themselves at the expense of good public health and medical care. A patient does not "hire a room" in a hospital. He purchases *hospital service* and the hospital authorities responsible for that service control the policies, of the institution, including the right to decide who shall and who shall not attend patients there. This legal precedent set in the Hurley Hospital case in Flint last year, was upheld by Judge Maher upon the testimony offered by Dr. Landers.—*Detroit Medical News,* August 28.

* * *

PROGRAM
INTERNATIONAL MEDICAL ASSEMBLY

Inter-State Postgraduate Medical Association of North America

October 30, 31, November 1, 2, and 3, 1939

Pre-assembly Clinics, October 28, Post-assembly Clinics, November 4, Chicago Hospitals

CHICAGO, ILLINOIS

Monday, October 30

8:00 A.M.

Diagnostic Clinics by: Dr. Walter C. Alvarez, Rochester, Minn.; Dr. Philip Lewin, Chicago; Dr. Soma Weiss, Hersey, Boston, Mass.; Dr. Fred W. Rankin, Lexington, Ky.; and Dr. John Alexander, Ann Arbor.

1:00 P.M.

Diagnostic Clinics by: Dr. Dallas B. Phemister, Chicago, and Dr. Russell L. Haden, Cleveland Clinic, Cleveland.

Address: "Surgical Aspects of Peptic Ulcer," Dr. Eldridge L. Eliason, Philadelphia.

Address: "Symptoms and Diagnosis of Obscure Fever," Dr. James G. Carr, Chicago.

Address: "Surgical Treatment of Gall-Stones," Dr. Elliott C. Cutler, Boston.

Address: "Medical Treatment of Liver Diseases," Dr. Albert M. Snell, Rochester, Minn.

Address: "Infections of the Upper Urinary Tract," Dr. C. Donald Creevy, Minneapolis, Minn.

7:00 P.M.

Address: "Allergy as a Factor in General Medicine," Dr. James H. Black, Dallas.

Address: "Management of Ileostomy and Colostomy, Dr. Richard B. Cattell, Boston, Mass.

Address: "Use of Hormones in Obstetrics," Dr. Frederick H. Falls, Chicago.

Address: "Abdominal Pain in Extra-Abdominal Origin," Dr. John H. Musser, New Orleans.

Address: "How Can High Mortality Rate from Skull Fractures be Reduced?", Dr. Harry Mock, Chicago.

Address: "Treatment of Pellagra and Associated Deficiencies," Dr. Tom D. Spies, Cincinnati.

Tuesday, October 31

8:00 A.M.

Diagnostic Clinics by: Dr. James E. Paullin, Atlanta; Dr. William R. Cubbins, Chicago; Dr. Reginald Fitz, Boston, Mass.; Dr. Eric Oldberg, Chicago; and Dr. Robert W. Keeton, Chicago.

Noon Intermission

1:00 P.M.

Diagnostic Clinics by: Dr. W. Wayne Babcock, Philadelphia, and Dr. Charles R. Austrian, Baltimore.

Address: "Anomalies of the Lower Urinary Tract," Dr. Hugh H. Young, Baltimore.

Address: "The Physicians' Interest in Gall-Bladder Disease," Dr. Alvah H. Gordon, Montreal.

Address: "Indications for Cesarean Section," Dr. Nicholson J. Eastman, Baltimore.

Address: "Rupture of Intervertebral Disks as a Cause of Low Back Pain and Chronic Recurring Sciatica," Dr. Alfred W. Adson, Rochester, Minn.

Address: "Cerotherapy in the Treatment of Pneumonia," Dr. Gerald S. Shibley, Cleveland.

7:00 P.M.

Address: "Exophthalmos," Dr. Albert D. Ruedemann, Cleveland.

Address: "Medical Treatment of Peptic Ulcer," Dr. Ralph C. Brown, Chicago.

Address: "The Management of Intestinal Obstruction," Dr. Thomas G. Orr, Kansas City.

Address: "Migraine," Dr. Harold G. Wolff, New York.

Address: "Operability of Carcinoma of the Stomach," Dr. Verne C. Hunt, Los Angeles.

Address: "The Present Status of Transurethral Resection," Dr. Herman L. Kretschmer, Chicago.

Wednesday, November 1

8:00 A.M.

Diagnostic Clinics by: Dr. William F. Rienhoff, Baltimore; Dr. Robert A. Black, Chicago; Dr. Wallace M. Yater, Washington, D. C.; Dr. Howard K. Gray, Rochester, Minn.; Dr. Loyal Davis, Chicago.

1:00 P.M.

Diagnostic Clinics by: Dr. Frank H. Lahey, Boston; and Dr. Elliott P. Joslin, Boston.

Address: "Treatment of Acute Spreading Peritonitis Following Ruptured Appendix," Dr. William D. Haggard, Nashville.

Address: "Newer Approach to the Etiology and Treatment of Angina Pectoris," Dr. William J. Kerr, San Francisco.

Address: "Carcinoma of the Lung," Dr. Evarts A. Graham, St. Louis.

Address: "Dysmenorrhea," Dr. John R. Fraser, Montreal.

Address: "The Hormones of the Gastro-Intestinal Tract," Dr. Andrew C. Ivy, Chicago.

ASSEMBLY DINNER, 7:00 P.M.

Dr. George W. Crile, President of Inter-State Postgraduate Medical Association of North America, Master of Ceremonies.

Addresses by:

Major General James C. Magee, Surgeon-General, U. S. Army, Washington, D. C.

Major General Ross T. McIntire, Surgeon-General, U. S. Navy, Washington, D. C.

Thursday, November 2
8:00 A.M.

Diagnostic Clinics by: Dr. Italo F. Volini, Chicago; Dr. John J. Moorhead, New York; Dr. Roy W. Scott, Cleveland; Dr. John F. Erdmann, New York, and Dr. Walter Timme, New York.

Noon Intermission
1:00 P.M.

Diagnostic Clinics by: Dr. Francis E. Senear, and Dr. Walter E. Dandy, Baltimore.

Address: "Chemotherapy in the Treatment of Pneumonia, Dr. Russell L. Cecil, New York.

Address: "Clinical and Biological Problems of the Irradiation of the Ovary," Professor Dott. Emanuele Momigliano, Rome, Italy.

Address: "The Clinical Use of Digitalis," Dr. Drew W. Luten, St. Louis.

Address: "Interrelation of the Organs of Internal Secretion," Dr. Elmer L. Sevringhaus, Madison, Wis.

Address: "Vascular and Abdominal Surgery," Dr. Charles H. Phifer, Chicago.

7:30 P.M.

Address: "Prevention and Treatment of Virus Disease," Dr. Thomas M. Rivers, New York.

Address: "Stricture of the Common and Hepatic Ducts," Dr. Waltman Walters, Rochester, Minn.

Address and Movie: "Transplantation of the Ureters into the Recto-Sigmoid and Cystectomy for Malignant Tumor of the Bladder," Dr. William E. Lower, Cleveland.

Address: "Management of the Menopause," Dr. Emil Novak, Baltimore.

Address and Movie: "The Distended Colon; Its Medical and Surgical Management," Dr. Claude F. Dixon, Rochester, Minn.

Address and Movie: "Fifty Years of Eclampsia, Placenta Previa, and Cesarean Section," Dr. Joseph B. DeLee, Chicago.

Friday, November 3
8:00 A.M.

Diagnostic Clinics by: Dr. Warren W. Cole, Chicago; Dr. James S. McLester, Birmingham; Dr. Irvin Abell, Louisville; Dr. Cyrus C. Sturgis, Ann Arbor, and Dr. George W. Crile, Cleveland.

1:00 P.M.

Diagnostic Clinics by: Dr. George P. Muller, Philadelphia, and Dr. Alton Ochsner, New Orleans.

Address: "The Management and Treatment of Scarlet Fever," Dr. John A. Toomey, Cleveland.

Address: "Diagnosis of Diseases of the Thyroid Gland," Dr. Donald Guthrie, Sayre, Pa.

Address: "The Jaundiced Bleeder; Control of Hemorrhage with Special Reference to Vitamin K Therapy," Dr. Harry P. Smith, Iowa City, Ia.

The following members of the Michigan State Medical Society received certificates of Associate Fellowship in Postgraduate Education at the 73rd Annual Convention of the Michigan State Medical Society, September, 1938. Certificates are awarded to physicians having completed certain specified postgraduate medical education sponsored by the Committee on Postgraduate Medical Education of the Michigan State Medical Society.

Hugo A. Aach, M.D., Kalamazoo; Nelson Abbott, M.D., Marshall; James Robert Adams, M.D., Dearborn; Raphael William Albi, M.D., Lake City; Napier S. Aldrich, M.D., Coldwater; Cornelius A. Alexander, M.D., Kalamazoo; William Edward

CONTINUOUS ACCEPTANCE BY THE COUNCIL ON FOODS OF THE AMERICAN MEDICAL ASSOCIATION SINCE 1932

A SCIENTIFICALLY constituted product devised for physicians' use in modifying fresh cow's milk or evaporated milk for infant feeding.

The addition of Hylac to diluted fresh cow's milk or diluted evaporated milk will result in mixtures containing the food constituents—fat, carbohydrate and protein—in essentially the same proportions as in woman's milk.

Furthermore, a formula in which Hylac is used as a modifier contains practically twice as much iron as a corresponding formula modified with carbohydrates alone.

The steadily increasing use of Hylac in the practice of pediatrics attests to the fact that physicians who have tried Hylac have obtained successful results from its use.

No laity advertising. No feeding directions given except to physicians.

For free samples and literature, mail your professional blank to

NESTLÉ'S MILK PRODUCTS, Inc.
155 East 44th Street . . . New York, N. Y.

Allegar, M.D., Pittsford; Arthur Darling Allen, M.D., Bay City; Herbert R. Allen, M.D., Battle Creek; Ralph V. Allen, M.D., Grand Rapids; Norman H. Amos, M.D., Battle Creek; Einer B. Andersen, M.D., Iron Mountain; Fred T. Andrews, M.D., Kalamazoo; Sherman E. Andrews, M.D., Kalamazoo; Robert J. Armstrong, M.D., Kalamazoo.

Arthur C. Bachus, M.D., Powers; Glenn R. Backus, M.D., Flint; George H. Baert, M.D., Grand Rapids; Louis John Bailey, M.D., Detroit; Abel J. Baker, M.D., Grand Rapids; Clarence Baker, M.D., Detroit; Joseph A. Bakst, M.D., Detroit; Frederick William Bald, M.D., Flint; Charles Sherre Ballard, M.D., Detroit; Milner S. Ballard, M.D., Grand Rapids; Festus Cecil Bandy, M.D., Sault Ste. Marie; Lawrence R. Banner, M.D., Kalamazoo; James W. Barnebee, M.D., Kalamazoo; Samuel E. Barnhart, M.D., Battle Creek; F. Elizabeth Barrett, M.D., Kalamazoo; William E. Barstow, M.D., St. Louis; Franklin Walter Baske, M.D., Flint; John C. S. Battley, M.D., Port Huron; Myron G. Becker, M.D., Edmore; Irvin J. Beebe, M.D., Morenci; Ernest H. Beernink, M.D., Grand Haven; William Clarence Beets, M.D., Grand Rapids; Gerald W. Behan, M.D., Galesburg; Charles M. Bell, M.D., Grand Rapids; Arthur K. Bennett, M.D., Marquette; Charles L. Bennett, M.D., Kalamazoo; Albert E. Bernstein, M.D., Detroit; Joseph P. Bertucci, M.D., Ishpeming; Herbert M. Best, M.D., Lapeer; William L. Bettison, M.D., Grand Rapids; Walter J. Bien, M.D., Coldwater; William G. Birch, M.D., Sault Ste. Marie; Theodore P. Bishop, M.D., Grand Rapids; Henry Martin Blackburn, M.D., Grand Rapids; James G. Blain, M.D., Sault Ste. Marie; Earl Bloomer, M.D., Dearborn; Leon M. Bogart, M.D., Flint; Frederick M. Boothby, M.D., Lawrence; William P. Bope, M.D., Decatur; Gabriel D. Bos, M.D., Holland; Edwin Gladstone Bovill, M.D., Detroit; Charles Thomas Bower, M.D., Hillsdale; George H. Boyce, M.D., Iron Mountain; DeVere R. Boyd, M.D., Muskegon; Carl William Bradford, M.D., Lansing; R. Gordon Brain, M.D., Flint; Charles W. Brayman, M.D., Cedar Springs; Ervin J. Brenner, M.D., Manistique; Jeannette M. Brigham, M.D., Howell; Harry Brown Britton, M.D., Ypsilanti; Audrey Orin Brown, M.D., Detroit; Byron Phillip Brown, M.D., Charlotte; Frederick W. Brown, M.D., Watervliet; George Maxwell Brown, M.D., Bay City; Eugene S. Browning, M.D., Grand Rapids; Eugene Taylor Brunson, M.D., Ganges; Kathryn Bryan, M.D., Manistee; Melvin J. Budge, M.D., Ithaca; Frederick G. Buesser, M.D., Detroit; G. R. Bullen, M.D., Jackson; Earl P. Bunce, M.D., Trufant; Wesley M. Burling, M.D., Grand Rapids; Byron E. Burnell, M.D., Flint; Dean C. Burns, M.D., Petoskey; Clarence E. Burt, M.D., Ithaca; Frederick J. Burt, M.D., Holly; Aaron Chapman Button, M.D., Saginaw; Nils O. Byland, M.D., Battle Creek.

Frederick J. Cady, M.D., Saginaw; George H. Caldwell, M.D., Kalamazoo; Lloyd Arthur Campbell, M.D., Saginaw; Richard J. Campbell, M.D., Battle Creek; Wilbur L. Casler, M.D., Marquette; Constantine Anthony Cetlinski, M.D., Detroit; Hector M. Chabut, M.D., Jackson; Myrton S. Chambers, M.D., Flint; Donald Chandler, M.D., Grand Rapids; Clarence D. Chapin, M.D., Columbiaville; William S. Chapin, M.D., Muskegon Heights; W. Earle Chapman, M.D., Cheboygan; Clarence Arthur Christensen, M.D., Dearborn; Earl O. Cilley, M.D., Grand Rapids; Clifford P. Clark, M.D., Flint; George L. Clarke, M.D., Detroit; Myron W. Clift, M.D., Flint; Clarence G. Clippert, M.D., Grayling; John Howard Cobane, M.D., Detroit; Horace R. Cobb, M.D., Kalamazoo; Milan Coburn, M.D., Coopersville; Edgar G. Cochrane, M.D., Detroit; Wayne A. Cochrane, M.D., Jackson; Leslie E. Coffin, M.D., Painesdale; Sol G. Cohan, M.D., Muskegon; Don Avon Cohoe, M.D., Detroit; Walter G. Colvin, M.D., Grand Rapids; George V. Conover, M.D., Flint; Thaddeus Sidney Conover, M.D., Flint; William S. Conway, M.D., Petoskey; Ralph G. Cook, M.D., Kalamazoo; John E. Cooper, M.D., Battle Creek; Clifford C. Corkill, M.D., Ontonagon; Jay C. Corsaut, M.D., Mason; Andre John Cortopassi, M.D., Saginaw; Floyd L. Covert, M.D., Gaines; Donald A. Cowan, M.D., Marquette; Ferdinand Cox, M.D., Jackson; Charles V. Crane, M.D., Grand Rapids; Harold D. Crane, M.D., Grand Rapids; Duane Wesley Crankshaw, M.D., Imlay City; Barney Alexander Credille, M.D., Flint; Robert Harold Criswell, M.D., Bay City; Leo J. Crum, M.D., Kalamazoo.

Ernest N. D'Alcorn, M.D., Muskegon; Harold J. Damstra, M.D., Grand Rapids; Lewis H. Darling, M.D., Lansing; Peter Harry Darpin, M.D., Detroit; Luther W. Day, M.D., Jonesville; Alfred Dean, M.D., Grand Rapids; Carleton Dean, M.D., Charlevoix; Ray Dean, M.D., Three Rivers; Guy William DeBoer, M.D., Grand Rapids; E. Ellsworth Dell, M.D., Sandlake; N. DelZingro, M.D., Davison; Gerald DeMaagd, M.D., Rockford; Richard J. DeMol, M.D., Grand Rapids; Walter den Bleyker, M.D., Kalamazoo; Isla G. DePree, M.D., Grand Rapids; Elvia C. Derickson, M.D., Burlington; John S. DeTar, M.D., Milan; Daniel DeVries, M.D., Grand Rapids; Willard W. Dickerson, M.D., Wahjamega; Willis L. Dixon, M.D., Grand Rapids; Frederick E. Dodds, M.D., Flint; Bernard J. Dowd, M.D., Kalamazoo; Samuel J. Drummond, M.D., Casnovia; Charles F. DuBois, M.D., Alma; John F. Dziuba, M.D., Detroit.

Robert M. Eaton, M.D., Grand Rapids; Clayton S. Emery, M.D., St. Joseph; William H. Enders, M.D., Jackson; Paul H. Engle, M.D., Olivet; John W. Evers, M.D., Flint.

Shakir E. Far, M.D., Quincy; Lynn A. Ferguson, M.D., Grand Rapids; Louis G. Ferrand, M.D., Rockford; Raymond G. Finnie, M.D., Hastings; Walter R. Finton, M.D., Jackson; Gordon F. Fisher, M.D., Hastings; Norman Willoughby Flaherty, M.D., River Rouge; Hugh Sherwood Foley, M.D., Dearborn; L. Fernald Foster, M.D., Bay City; Wallace M. Foster, M.D., Detroit; Earl H. Foust, M.D., Lansing; Gilbert E. Frank, M.D., Harbor Springs; Robert Howard Fraser, M.D., Battle Creek; Orrin H. Freeland, M.D., Mason; Harvey Thomas Fuller, M.D., Mt. Morris; Ray T. Fuller, M.D., Kalamazoo; Rodolphus W. Fuller, M.D., Crystal.

Everett W. Gaikema, M.D., Grand Rapids; Edwin C. Galsterer, M.D., Saginaw; William Gadsden Gamble, Jr., M.D., Bay City; Neil A. Gates, M.D., Ann Arbor; Cleo R. Gatley, M.D., Pontiac; Frank D. German, M.D., Pontiac; Louis W. Gerstner, M.D., Kalamazoo; Floyd F. Gibbs, M.D., Grand Rapids; John R. Giffen, M.D., Bangor; Margery J. Gilfillan, M.D., Battle Creek; Orla Hilliard Gillett, M.D., Grand Rapids; H. Maxwell Golden, M.D., Flint; Dwight Goodrich, M.D., Traverse City; Cletus J. Golinvaux, M.D., Monroe; Raymond Salot Goux, M.D., Detroit; Lee Otis Grant, M.D., Grand Rapids; William A. Grant, M.D., Milford; George P. Graybiel, M.D., Caledonia; Burt F. Green, M.D., Hillsdale; Irving W. Greene, M.D., Owosso; Newton H. Greenman, M.D., Decatur; Sherman Gregg, M.D., Kalamazoo; Arthur James Griffith, M.D., Detroit; Francis T. Grillet, M.D., Alanson; John F. Gruber, M.D., Cadillac; Andros Gulde, M.D., Chelsea; George L. Gundry, M.D., Grand Blanc; John W. Gunn, M.D., Watervliet; Isadore H. Gutow, M.D., Flint.

Alpheus T. Hafford, M.D., Albion; Robert F. Hague, M.D., Flint; Arthur James Hamilton, M.D., Hillsdale; Eugene A. Hand, M.D., Saginaw; John

W. Handy, M.D., Flint; Henry A. Hanelin, M.D., Marquette; George R. Hanke, M.D., Ransom; Ernest C. Hansen, M.D., Manistee; Harvey C. Hansen, M.D., Battle Creek; Marco M. Hansen, M.D., Greenville; George C. Hardie, M.B., Jackson; Don V. Hargrave, M.D., Eaton Rapids; William L. Harrigan, M.D., Mt. Pleasant; Dean W. Hart, M.D., St. Johns; Lloyd C. Harvie, M.D., Saginaw; Wilfrid Haughey, M.D., Battle Creek; William H. Haughey, M.D., Battle Creek; James Ward Hawkins, M.D., Detroit; Gaillard Hastings Healy, M.D., Bay City; Dewey R. Heetderks, M.D., Grand Rapids; Charles L. Hess, M.D., Bay City; Carlon R. Hills, M.D., Battle Creek; Russell J. Himmelberger, M.D., Lansing; A. Deane Hobbs, M.D., St. Louis; Charles L. Hodge, M.D., Reading; William G. Hoebeke, M.D., Kalamazoo; Aben Hockman, M.D., Constantine; Howard Bostwick Hoffman, M.D., Ludington; Marinus A. Hoffs, M.D., Lake Odessa; Fred J. Hohn, M.D., Saginaw; Benton A. Holm, M.D., Cadillac; Roy H. Holmes, M.D., Muskegon; Benjamin George Holtom, M.D., Battle Creek; Daniel Powell Hornbogen, M.D., Marquette; William Boyd Hornsby, M.D., Clinton; James Houston, M.D., Swartz Creek; Lloyd W. Howe, M.D., Marquette; Don M. Howell, M.D., Alma; Robert R. Howlett, M.D., Caro; Wilbur F. Hoyt, M.D., Paw Paw; Charles D. Huber, M.D., Charlotte; Willis Herbert Huron, M.D., Iron Mountain; Orrin D. Hudnutt, M.D., Plainwell; John G. Huizinga, M.D., Holland; Otto S. Hult, M.D., Gladstone; Arthur A. Humphrey, M.D., Battle Creek; Perry R. Hungerford, M.D., Concord; William A. Hyland, M.D., Grand Rapids.

Thomas C. Irwin, M.D., Grand Rapids; Jos. Clement Isaacs, M.D., Detroit.

Robert Jaenichen, M.D., Saginaw; L. Mae James, M.D., Detroit; Walter J. Jaracz, M.D., Grand Rapids; Hugh Malcolm Jardine, M.D., West Branch; Wesley O. Jennings, M.D., Kalamazoo; Otto F. Jens, M.D., Essexville; Joseph Jons, M.D., Ionia; Oren G. Johnson, M.D., Mayville; Philip Richard Johnson, M.D., Mount Pleasant; Tyre K. Jones, M.D., Marshall; William S. Jones, M.D., Menominee.

Roland E. Kalmbach, M.D., Lansing; David M. Kane, M.D., Sturgis; Joseph B. Kass, M.D., Detroit; Gottlieb Henry Kaven, M.D., Unionville; Thomas Francis Keating, M.D., Detroit; Henry J. Kehoe, M.D., East Detroit; Lee E. Kelsey, M.D., Lakeview; Gerrit J. Kemme, M.D., Zeeland; William L. Kemp, M.D., Birmingham; Rockwell M. Kempton, M.D., Saginaw; Howard J. Kerr, M.D., Muskegon; George I. Keskey, M.D., Marquette; Mana Kessler, M.D., Bay City; Sabina Kessler, M.D., Bay City; Claude R. Keyport, M.D., Grayling; John G. Kingma, M.D., Decatur; Paul C. Kingsley, M.D., Battle Creek; F. Oswald Kirker, M.D., Sandusky; J. Gilmore Kirker, M.D., Detroit; David Kliger, M.D., Detroit; Paul A. Koestner, M.D., Kalamazoo; Martin E. Kohn, M.D., Detroit; Henry P. Kooistra, M.D., Grand Rapids; William C. Kools, M.D., Holland; John Kremer, M.D., Grand Rapids; George C. Kreutz, M.D., Detroit; Christian G. Krupp, M.D., Grand Rapids; Harry B. Kyselka, M.D., Traverse City.

Robert G. Laird, M.D., Grand Rapids; Roy Lee Laird, M.D., Highland Park; Walter W. Lang, M.D., Kalamazoo; Derk B. Lanting, M.D., Byron Center; Floyd H. Lashmet, M.D., Petoskey; Clarence P. Lathrop, M.D., Hastings; John Lawther, M.D., Charlotte; Edward O. Leahy, M.D., Jackson; Frederick W. Lee, M.D., Fairview; William LeFevre, M.D., Muskegon; Arthur E. Leitch, M.D., Saginaw; Charles Edward Lemen, M.D., Traverse City; Walter Lemke, M.D., Shelby; Louis S. Leo, M.D., Houghton; Dirk Lettinga, M.D., Grant; David A.

Doin' Nicely Since 1820!

Your first sip o' Johnnie Walker will introduce ye to the first Scotch o' Scotland. Aye! One sip . . . an' ye'll agree there's no whisky like Scotch . . . an' Johnnie Walker is Scotch at its smooth, mellow best!

It's sensible to stick with

JOHNNIE WALKER

BLENDED SCOTCH WHISKY

RED LABEL,
8 years old.

•

BLACK LABEL,
12 years old.
Both 86.8 proof.

Canada Dry Ginger Ale, Inc., New York, N. Y.; Sole Distributors

RADIUM

RENTED
for the individual case at lowest rates. Instruments loaned.

LEASED
in any quantity of 50 milligrams or more, on a yearly basis. Continuous possession. No investment.

SOLD
in any quantity in latest platinum containers.

RADON in all-gold Implants at $2.50 per millicurie.

For details, address

RADIUM AND RADON CORP.
Marshall Field Annex • Randolph 8855
CHICAGO

All worth while laboratory examinations; including—

Tissue Diagnosis

The Wassermann and Kahn Tests

Blood Chemistry

Bacteriology and Clinical Pathology

Basal Metabolism

Aschheim-Zondek Pregnancy Test

Intravenous Therapy with rest rooms for Patients.

Electrocardiograms

Central Laboratory

Oliver W. Lohr, M.D., Director

537 Millard St.

Saginaw

Phone, Dial 2-3893

The pathologist in direction is recognized by the Council on Medical Education and Hospitals of the A. M. A.

Levine, M.D., Iron River; J. Hugh Lewis, M.D., Wyandotte; Lee A. Lewis, M.D., Manistee; Paul Ralph Lieberthal, M.D., Ironwood; Harry Lieffers, M.D., Grand Rapids; Emerson J. Lindsay, M.D., Walled Lake; William Littlejohn, M.D., Bridgman; Stewart Lofdahl, M.D., Nashville; George W. Logan, M.D., Flushing; Oliver W. Lohr, M.D., Saginaw; Martha Longstreet, M.D., Saginaw; John L. Loomis, M.D., Muskegon; Maurice C. Loree, M.D., Lansing; Robert T. Lossman, M.D., Traverse City; Stanley T. Lowe, M.D., Battle Creek; Clyde Allen Lown, M.D., Grand Ledge; L. Coleman Ludlum, M.D., Lansing; Chester A. E. Lund, M.D., Middleville; Earl Forest Lutz, M.D., Detroit.

John J. McCann, M.D., Ionia; James McCarroll, M.D., Cheboyan; Joseph S. McCarthy, M.D., Kalamazoo; James P. McConkie, M.D., Birmingham; Lester E. McCullough, M.D., Detroit; John J. McDermott, M.D., St. Joseph; Douglas McDowell, M.D., West Branch; William Edward McGarvey, M.D., Jackson; Kenith S. McIntyre, M.D., Hastings; Joseph L. McKenna, M.D., Grand Rapids; Wellie S. McKenzie, M.D., Adrian; Gordon L. McKillop, M.D., Gaylord; Alexander R. McKinney, M.D., Saginaw; Joshua Alexander McLandress, M.D., Saginaw; Edwin A. McManus, M.D., Mesick; James W. MacMeekin, M.D., Saginaw; John Harold McMillin, M.D., Monroe; Arthur A. McNabb, M.D., Lawrence; Howard H. McNeill, M.D., Pontiac, Leonard Douglas MacRae, M.D., Gagetown; Edward D. Maire, M.D., Grosse Point; James G. Malone, M.D., Kalamazoo; Vincent S. Mancuso, M.D., Detroit; M. Mozart Marrin, Jr., M.D., Grand Rapids; Fay M. Marsh, M.D., Ionia; Roland G. B. Marsh, M.D., Tecumseh; John P. Marsh, M.D., Grand Rapids; William H. Marshall, M.D., Flint; E. Arthur Martindale, M.D., Hillsdale; Pedro O. Martinez, M.D., Detroit; Elta Mason, M.D., Flint; Robert J. Mason, M.D., Detroit; Wesley H. Mast, M.D., Petoskey; H. Frazyer Mattson, M.D., Hillsdale; John G. Maurer, M.D., Reese; John C. Maxwell, M.D., Paw Paw; Frederick Tracy May, Jr., M.D., Detroit; Herbert M. Maynard, M.D., Ionia; Frederick C. Mayne, M.D., Cheboygan; Jason B. Meade, M.D., Jackson; Wilbur C. Medill, M.D., Plainwell; Frederick J. Melges, M.D., Battle Creek; William F. Mertaugh, M.D., Sault Ste. Marie; Henry G. Merz, M.D., Lapeer; Harry C. Metzger, M.D., Detroit; Henry J. Meyer, M.D., Saginaw; H. R. Meyer, M.D., Lansing; Charles Gilbert Miller, M.D., Sturgis; Maurice P. Miller, M.D., Trenton; Arthur M. Moll, M.D., Grand Rapids; George F. Moore, M.D., Mt. Clemens; Gregory P. Moore, M.D., Cadillac; Hugh R. Moore, M.D., Newaygo; John W. Moore, M.D., Flint; Vernon M. Moore, M.D., Grand Rapids; Edgar T. Morris, M.D., Nashville; Ray S. Morrish, M.D., Flint; Donald B. Morrison, M.D., Tekonsha; Edward C. Mosier, M.D., Otisville; H. Allen Moyer, M.D., Charlotte; Cornelius D. Mulder, M.D., Springlake; Hugh F. Mullenmeister, M.D., Bear Lake; Miles J. Murphy, M.D., Grand Rapids; Norman D. Murphy, M.D., Bangor.

John Willis Nagle, M.D., Grosse Ile; Albert W. Nelson, M.D., Battle Creek; Algot R. Nelson, M.D., Grand Rapids; Ray E. Newton, M.D., Jackson; Albert Noordewier, M.D., Grand Rapids; William W. Norris, M.D., Portland.

Ellery A. Oakes, M.D., Manistee; Ira D. Odle, M.D., Flint; Alfred B. Olsen, M.D., Battle Creek; Raymond G. Olson, M.D., Muskegon Heights; Charles H. O'Neil, M.D., Flint; Frank Ostrander, M.D., Freeland.

Emory Madison Paine, Jr., M.D., Grand Ledge; Emory Madison Paine, Sr., M.D., Grand Ledge; Russell E. Palmer, M.D., St. James; Carl Pangerl,

M.D., Muskegon Heights; Martin Patmos, M.D., Kalamazoo; Adonis Patterson, M.D., Battle Creek; Wilfrid P. Patterson, M.D., Grand Rapids; Charles H. Peabody, M.D., Lake Odessa; William Lacland Peters, M.D., Morenci; Ralph Harrison Pino, M.D., Detroit; Rolland C. Pochert, M.D., Owosso; Lunette I. Powers, M.D., Muskegon; Frank A. Pratt, M.D., Kalamazoo; Oliver C. Pratz, M.D., Flint; Clarence C. Probert, M.D., Flint; Alton E. Pullon, M.D., Kalamazoo.

Philip H. Quick, M.D., Olivet; Ruth E. Quigley, M.D., Grand Rapids.

Clara V. Radabaugh, M.D., Battle Creek; L. Paul Ralph, M.D., Grand Rapids; Gladwin E. Ramseyer, M.D., Plainwell; Herbert E. Randall, M.D., Flint; Frank E. Reeder, M.D., Flint; Edwin J. Rennell, M.D., Traverse City; J. Wesley Rice, M.D., Sturgis; George H. Rigterink, M.D., Hamilton; John W. Rigterink, M.D., Grand Rapids; Aaron D. Riker, M.D., Pontiac; Herbert Frank Robb, M.D., Belleville; William L. Rodgers, M.D., Grand Rapids; John Randolph Rogers, M.D., Grand Rapids; Robert Rosenberg, M.D., Saginaw; Herman G. Rosenblum, M.D., Flint; Paul Roth, M.D., Battle Creek; Clark W. Royer, M.D., Battle Creek; Richard Sweeney Ryan, M.D., Saginaw.

Gilbert B. Saltonstall, M.D., Charlevoix; John T. Sample, M.D., Saginaw; Franklin W. Sassman, M.D., Charlotte; Lloyd L. Savage, M.D., Caro; Waldo A. Schaefer, M.D., Port Huron; Elmer George Schaiberger, M.D., Saginaw; Cortlandt W. Schepeler, M.D., Brooklyn; Peter A. Scheurer, M.D., Manchester; William Scholten, M.D., Kalamazoo; Thomas Schrier, M.D., Comstock; Robert D. Scott, M.D., Flint; Laurence Fox Segar, M.D., Detroit; Bertha L. Selmon, M.D., Battle Creek; George A. Seybold, M.D., Jackson; Leighton O. Schantz, M.D., Flint; Milton Shaw, M.D., Lansing; Alden G. Sheets, M.D., Eaton Rapids; Suel A. Sheldon, M.D., Saginaw; R. N. Sherman, M.D., Bay City; Leland P. Shipp, M.D., Battle Creek; Ralph William Shook, M.D., Kalamazoo; Laurence Eugene Showalter, M.D., Cadillac; Isaiah Sicotte, M.D., Michigamme; George W. Sippola, M.D., Detroit; Walter K. Slack, M.D., Saginaw; Edward F. Sladek, M.D., Traverse City; Blythe R. Sleeman, M.D., Linden; Raymond D. Sleight, M.D., Battle Creek; Leal K. Slote, M.D., Constantine; Clarence Vernon Smith, M.D., Detroit; Edwin M. Smith, M.D., Grand Rapids; R. Earle Smith, M.D., Grand Rapids; W. Joe Smith, M.D., Cadillac; Samuel S. Sorkin, M.D., Flint; Harold I. Sparling, M.D., Northville; Mansfield L. Spears, M.D., Pontiac; Clayton Myron Spencer, M.D., Scottsville; Ulysses G. Spohn, M.D., Fairgrove; Russell Addison Springer, M.D., Centreville; Wendell H. Stadle, M.D., Battle Creek; Hugh Stalker, M.D., Grosse Pointe; Stanley A. Stealy, M.D., Grayling; Eugene J. Steinberger, M.D., Detroit; Abraham A. Steiner, M.D., Wacousta; Milton J. Steinhardt, M.D., Detroit; Floyd H. Steinman, M.D., Flint; John S. Sterling, M.D., Jerome; William Warren Stevenson, M.D., Flint; Leonard H. Stewart, M.D., Kalamazoo; Albert E. Stickley, M.D., Coopersville; Fordyce H. Stone, M.D., Beulah; Virgil Emmet Stover, M.D., Grand Rapids; Percival C. Strauss, M.D., Lansing; Clayton K. Stroup, M.D., Flint; Gerhardus J. Stuart, M.D., Grand Rapids; Olin H. Stuck, M.D., Otsego; Cullen E. Sugg, M.D., Grand Rapids; J. Marion Sutherland, M.D., Detroit; Fred G. Swartz, M.D., Traverse City; Earl R. Swift, M.D., Lakeview.

Charles Ten Houten, M.D., Paw Paw; Arthur J. Tesseine, M.D., Grand Rapids; James H. Teusink, M.D., Cedar Springs; Siegfried W. Thieme, M.D., Ravenna; James A. Thomas, M.D., Coldwater;

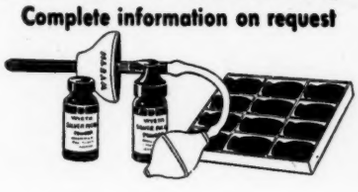
A CONVENIENT OFFICE TREATMENT FOR TRICHOMONAS VAGINITIS

SILVER PICRATE
Wyeth

THIS simple treatment requires but two office visits, a week apart, for insufflations and the nightly insertion of a Silver Picrate suppository for twelve nights.

Complete remission of symptoms and removal of the trichomonad from the vaginal smear usually is effected following the Silver Picrate treatment for trichomonas vaginitis.

Complete information on request



JOHN WYETH & BROTHER, INCORPORATED, Philadelphia, Pa.

Thomas Walter Thompson, M.D., Traverse City; Joseph C. Tiffany, M.D., Grand Rapids; Arthur C. Tompsett, M.D., Hesperia; Clarence Eneas Toshach, M.D., Saginaw; Frederick D. Trautman, M.D., Frankfort.

Milton J. Uloth, M.D., Ortonville; Clara H. Unrath, M.D., Kalamazoo.

Elijah VanCamp, M.D., Battle Creek; Bert Van Der Kolk, M.D., Hopkins; William V. Vander Voort, M.D., Battle Creek; Theodore P. Vander Zalm, M.D., Lansing; Chad Adelbert Van Dusen, M.D., Blissfield; J. Howard Van Ness, M.D., Allegan; Harold E. Veldman, M.D., Grand Rapids; Lloyd E. Verity, M.D., Battle Creek; William R. Vis, M.D., Grand Rapids; Adolph Emil Voegelin, M.D., Detroit; Otto von Renner, M.D., Vassar; Frank Anderson Votey, M.D., Grand Rapids; Jay D. Vyn, M.D., Grand Rapids.

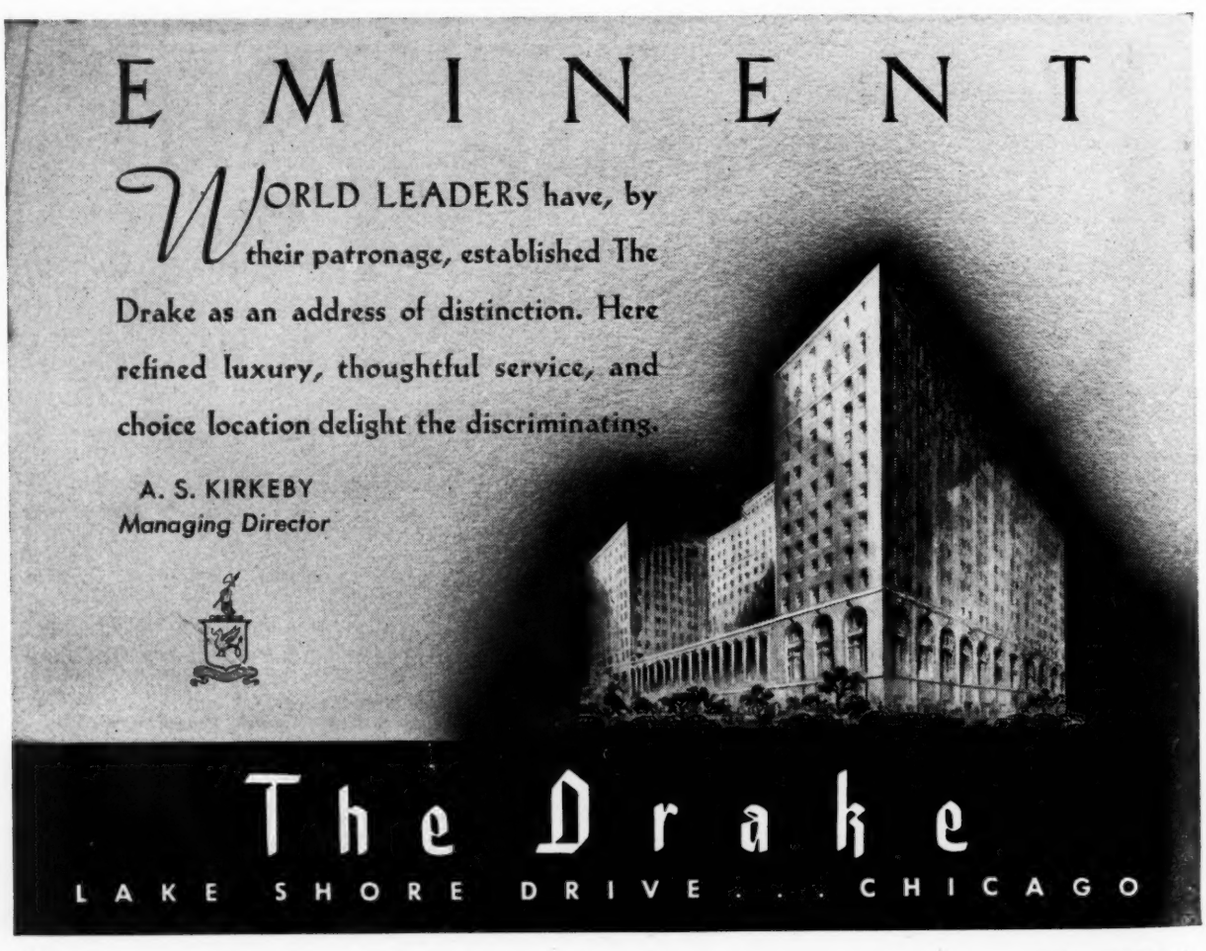
John J. Walch, M.D., Escanaba; Coburn E. Walden, M.D., Flint; Robert J. Walker, M.D., Saugatuck; William J. Wall, M.D., Davison; Herbert C. Wallace, M.D., Saginaw; Franklin R. Walters, M.D., Battle Creek; David R. Wark, M.D., Flint; Ernest Hamilton Watson, M.D., Detroit; Lewis R. Way, M.D., Traverse City; John C. Webster, M.D., Marlette; Herbert S. Wedel, M.D., Freeport; Harold R. Weidner, M.D., Coldwater; John N. Wenger, M.D., Coopersville; Herbert O. Westervelt, M.D., Benton Harbor; T. P. Wickliffe, M.D., Calumet; Silas Clarence Wiersma, M.D., Allendale; Thomas Wilensky, M.D., Eaton Rapids; Arthur Paul Wilkinson, M.D., Detroit; Chester A. Wilkinson, M.D., Kendall; Leslie L. Willoughby, M.D., Flint; Norman D. Wilson, M.D., Jackson; Pitt S. Wilson, M.D., Muskegon; George E. Winter, M.D., Jackson; Kenneth Phillip Wolfe, M.D., Breckenridge; William Peter Woodworth, M.D., Detroit; Walter J. Wright, M.D., Ypsilanti.

Joshua L. Yeagley, M.D., Waldron; Stuart Yntema, M.D., Saginaw; William Rae Young, M.D., Lawton.

Harry B. Zemmer, M.D., Lapeer; Irwin H. Zielke, M.D., Traverse City; Israel J. Zimmerman, M.D., Detroit; Jos. G. Zimmerman, M.D., Traverse City.

What is the course of the life
Of mortal men on the earth?—
Most men eddy about
Here and there—eat and drink,
Chatter and love and hate,
Gather and squander, are raised
Aloft, are hurl'd in the dust,
Striving blindly, achieving
Nothing; and then they die—
Perish! and no one asks
Who or what they have been,
More than he asks what waves
In the moonlit solitudes mild
Of the midmost Ocean, have swell'd,
Foam'd for a moment, and gone.

MATTHEW ARNOLD.


EMINENT
WORLD LEADERS have, by their patronage, established The Drake as an address of distinction. Here refined luxury, thoughtful service, and choice location delight the discriminating.
A. S. KIRKEBY
Managing Director
The Drake
LAKE SHORE DRIVE . . . CHICAGO

IN MEMORIAM

Charles W. Courville, M.D.

Dr. Charles W. Courville of Detroit, died on August 31, 1939. He was born in Detroit fifty-eight years ago, and was graduated from the Detroit College of Medicine in 1905. Dr. Courville was a diagnostician for the Detroit Board of Health and a member of the staff of Providence Hospital, Detroit. He had been in practice in Detroit for thirty-three years and was a member of the Wayne County, Michigan State and American Medical Associations. He is survived by his wife; a son, Dr. Charles J. Courville; three brothers, Herbert, John and Fred, and two sisters, Miss Minnie Courville and Mrs. Herbert Simmons.

J. Frank Kilroy, M.D.

Dr. J. Frank Kilroy, supervisor of the City Physician's office for nineteen years in Detroit, died on September 9, 1939. He was born in Detroit sixty years ago, attended the Jesuit College, now the University of Detroit, and was graduated from the Detroit College of Medicine. Dr. Kilroy leaves two brothers, Leonard and Lawrence, and a sister, Josephine.

A. J. MacKenzie, M. D.

Dr. Alex J. MacKenzie, prominent Port Huron physician and surgeon, died July 19, 1939, of coronary thrombosis while on a vacation at Killarney, Ontario. He was born 1877, at Point Edward, Ontario, and received his early education in Canadian elementary schools. He taught in a rural school in Ontario for almost three years, after which he entered the Detroit College of Medicine and was graduated in 1904, entering practice in Port Huron. In 1922, he made a clinical tour of hospitals in Edinburgh, Leeds, London, Paris, Berne and Rome. Dr. MacKenzie served eleven months in France during the War, and was given a captain's commission. He was a member of the American College of Surgeons, American Medical Association, Michigan State Medical Society, and was a former president of the St. Clair County Medical Society. He had been chief surgeon for the western division of the Grand Trunk Railway since 1905, and was the first chief of staff of the new Port Huron General Hospital. Dr. MacKenzie was also a member of the Detroit Yacht Club, Grosse Pointe Yacht Club and the Knights Templar. In 1904 he married Miss Anna Smith who died in 1919. In 1927 Dr. MacKenzie married Miss Adassa Drope, who survives him. Two sons, Gerard S. and Alex Jr. of Port Huron, and a brother and sister also survive him.

Walter E. Ward, M.D.

Dr. Walter E. Ward of Owosso, died on September 11, 1939, at the age of seventy-eight. He was graduated from the University of Michigan in 1883. Dr. Ward was for years the secretary of his county Medical Society. He was the oldest secretary in point of both age and service. He was elected emeritus member of the Michigan State Medical Society when it met in Battle Creek in September, 1934.

E. H. ROWLEY

Artificial Limbs and Braces

ABDOMINAL BELTS
TRUSSES
ELASTIC HOSIERY

Advantages of Model Illustrated at the Left

1. **Life like, walks as naturally as the human leg.**
2. **Durable and serviceable.**
3. **Comfort-soft socket.**
4. **All ball bearing joints.**
5. **Automatic knee control.**
6. **Hip control belt (Shoulder straps no longer necessary).**
7. **Sponge rubber foot.**
8. **Materials, workmanship and fitting guaranteed.**
9. **Write or phone us, a representative will call on you.**

30 YEARS SERVICE TO THE MEDICAL PROFESSION

E. H. ROWLEY CO.
of Grand Rapids, Inc.
120 S. Division S.

E. H. ROWLEY CO.
1504 Broadway
Detroit

OPPORTUNITY

For Establishment of Sanatorium For Nervous or Narcotic Cases, Maternity Hospital, Etc.

45 room building in A1 condition, located on five acres of beautiful park-like grounds, secluded and quiet, fronting river and federal highway in South Central Michigan. Completely furnished down to kitchen and laundry equipment. A clean proposition that can be bought for ONE THIRD of the appraised value.

•

For information address

R. H. MUENCH

P. O. Box 1363 **Indianapolis, Indiana**

Ferguson-Droste-Ferguson Sanitarium

✤

Ward S. Ferguson, M. D. **James C. Droste, M. D.** **Lynn A. Ferguson, M. D.**

✤

PRACTICE LIMITED TO
DIAGNOSIS AND TREATMENT OF

DISEASES OF THE RECTUM

✤

Sheldon Avenue at Oakes
GRAND RAPIDS, MICHIGAN

✤

Sanitarium Hotel Accommodations

THE DOCTOR'S LIBRARY

Acknowledgment of all books received will be made in this column and this will be deemed by us a full compensation to those sending them. A selection will be made for review, as expedient.

MEDICOLEGAL PHASES OF OCCUPATIONAL DISEASES. An Outline of Theory and Practice. By C. O. Sappington, A.B., M.D., Dr. P. H., Consultant, Occupational Diseases and Industrial Hygiene, Formerly Director of Industrial Health, National Safety Council. Chicago: Industrial Health Book Council, 1939.

* * *

TREATMENT BY DIET. By Clifford J. Barborka, B.S., M.D., D.Sc., F.A.C.P., Department of Medicine, Northwestern University Medical School, Chicago. Formerly Consulting Physician, The Mayo Clinic, Illustrated, Fourth Edition, Revised, 1939. Philadelphia: The J. B. Lippincott Company.

* * *

SURGERY OF THE EYE: By Meyer Wiener, M.D., Professor of Clinical Ophthalmology, Washington University School of Medicine, St. Louis, Missouri; and Bennett Y. Alvis, M.D., Assistant Professor of Clinical Ophthalmology, Washington University School of Medicine, St. Louis. 445 pages with 396 illustrations. Philadelphia and London: W. B. Saunders Company, 1939. Cloth, $8.50.

This is entirely a book for the ophthalmologist. A significant feature of it is the detail description with illustrations of each major operation on the eye. Serial drawings illustrating operative technic have been freely used.

* * *

NEW AND NONOFFICIAL REMEDIES, 1939. Containing Descriptions of the Articles Which Stand Accepted by the Council on Pharmacy and Chemistry of the American Medical Association on January 1, 1939. American Medical Association. 535 North Dearborn Street, Chicago, 1939.

This book constitutes a list of articles that stand accepted by the Council on Pharmacy and Chemistry up to January 1, 1939. In it one will find a description of these articles, their actions and therapeutic uses. Following each description there is a list of available preparations that have been accepted.

* * *

CLINICAL PATHOLOGICAL GYNECOLOGY. By J. Thornwell Witherspoon, B.S. (Princeton); B.A. (Oxon); M.D. (Johns Hopkins). Formerly Associate Professor of Experimental and Pathological Gynecology, Indiana University Medical Center, Indianapolis. Illustrated with 271 Engravings. Lea & Febiger. Philadelphia. 1939.

The author offers this volume primarily as a discussion of organic gynecological pathology. He has arranged the subject matter under the headings of anatomical locations and, after discussing the various phases of pathology, gives their clinical application in a discussion of their etiology, symptoms and treatment. The chapters of hormones and menstruation and its disorders are brief, yet informative. Illustrations are used freely which add to the value of the book.

For those who wish a concise discussion of the various diseases affecting the female generative tract with special stress laid on their pathology, this book will prove of value.

* * *

RECENT ADVANCES IN HAEMATOLOGY. By A. Piney, M.D., Ch.B. (Birm.); M.R.C.P. (Lond.) Assistant Physician, St. Mary's Hospital for Women and Children, London. Fourth Edition with 8 coloured plates and 34 text-figures. Philadelphia. P. Blakiston's Son & Co. Inc. 1012 Walnut Street. 1939.

The author acknowledges the impossibility of presenting only the "recent advances in hæmatology" and has included many well-known facts concerning the blood. The greater part of the book deals with the formed elements of the blood and the blood forming organs. A knowledge of the origin, structure, functions, and abnormalities of both cells and tissues are considered as necessary to a proper un-

derstanding of pathological changes that may be encountered. Thus, we find a description of the various cells of the blood. These are illustrated by many colored plates reproducing the colors of the stained cells as viewed under the microscope.

Finally, we find a description of the various so-called blood diseases and here again are many colored illustrations of microscopic findings in these diseases.

* * *

MENSTRUAL DISORDERS—PATHOLOGY, DIAGNOSIS AND TREATMENT. By C. Frederic Fluhman, B.A., M.D., C.M. Associate Professor of Obstetrics and Gynecology, Stanford University School of Medicine, San Francisco, California; Assistant Visiting Obstetrician and Gynecologist to Lane and Stanford University Hospitals; Fellow of the American Gynecological Society. Illustrated. Philadelphia and London. W. B. Saunders Company. 1939.

In order to understand "menstrual disorders" the author realizes the necessity for a preliminary understanding of the normal physiology of the menstrual phenomenon. Accordingly, he has devoted considerable space to the menarche, the menstrual cycle, the morphologic changes during the menstrual cycle and to the comparative changes of menstruation. Because of the interest shown in recent years in endocrine glands, he gives special attention to the importance of the hormonal factors affecting the menstrual function in the light of present scientific investigation. His classification of menstrual disorders is rational and his discussion of the various manifestations of disorder in the menstrual function is thorough and logical. Because the etiology of many of these disorders is, as yet, more or less obscure, he discusses their causation from the basis of clinical observations and of pathologic findings, as well as from the point of view of recent scientific biologic investigation and research. The treatment outlined, not only is directed to the removal of the cause whenever possible, but to the relief of symptoms as well.

For those who desire a scientific discussion of a subject much in the literature and one concerning which there is much misinformation, this would seem to be a worthy addition to the library.

* * *

ANNUAL REPRINT OF THE REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY, of the American Medical Association for 1938 with the Comments that have appeared in the Journal. American Medical Association. 535 North Dearborn Street, Chicago. 1939.

This volume is the annual reprint of the Reports of the Council on Pharmacy and Chemistry and contains these reports as published in the Journal and those of lesser importance which were not published. In it one finds a discussion of various preparations as they have been presented for admission to the N.N.R.; and for those who are interested in such discussions the book will find a welcome place.

* * *

CARDIOVASCULAR DISEASES—THEIR DIAGNOSIS AND TREATMENT. By David Scherf, M.D., and Linn J. Boyd, M.D., F.A.C.P. Associate Professor of Clinical Medicine and Professor of Medicine, respectively, The New York Medical College, Flower and Fifth Avenue Hospitals. St. Louis. The C. V. Mosby Company, 1939.

Cardiovascular Diseases by David Scherf and Linn Boyd of New York Medical College and published by C. V. Mosby is the title of a book of about four hundred pages dealing with diagnosis and treatment of various syndromes coming under this title. It is a small concise book giving information about diagnosis and treatment of the most important problems of cardiovascular diseases. It omits almost entirely any reference to electrography in as much as the book is intended for the practitioner who has no means at his disposal for that phase of diagnosis. A great majority of the book

PHYSICIANS CASUALTY ASSOCIATION
PHYSICIANS HEALTH ASSOCIATION

HOSPITAL ACCIDENT SICKNESS } Insurance

For ethical practitioners exclusively
(50,000 Policies in Force)

LIBERAL HOSPITAL EXPENSE COVERAGE	**For $10.00 per year**
$5,000.00 ACCIDENTAL DEATH **$25.00 weekly indemnity, accident and sickness**	**For $33.00 per year**
$10,000.00 ACCIDENTAL DEATH **$50.00 weekly indemnity, accident and sickness**	**For $66.00 per year**
$15,000.00 ACCIDENTAL DEATH **$75.00 weekly indemnity, accident and sickness**	**For $99.00 per year**

37 years under the same management

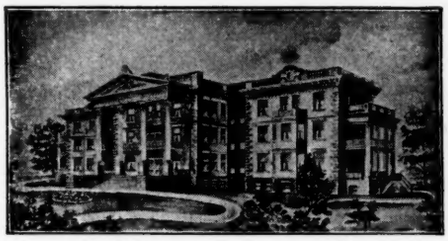
$1,700,000 INVESTED ASSETS
$9,000,000 PAID FOR CLAIMS

$200,000 deposited with State of Nebraska for protection of our members.

Disability need not be incurred in line of duty—benefits from the beginning day of disability.

Send for applications, Doctor, to

400 First National Bank Building Omaha, Nebraska



WAUKESHA SPRINGS SANITARIUM

WAUKESHA SPRINGS SANITARIUM

For the Care and Treatment of Nervous Diseases

Building Absolutely Fireproof

BYRON M. CAPLES, M. D., Medical Director
FLOYD W. APLIN, M. D.
WAUKESHA, WIS.

DeNIKE SANITARIUM, Inc.
Established 1893

EXCLUSIVELY for the TREATMENT
OF
ACUTE and CHRONIC ALCOHOLISM

Complete information can be secured by calling

Cadillac 2670

or by writing to

1571 East Jefferson Avenue
DETROIT

A. JAMES DeNIKE, M.D.
Medical Superintendent

LABORATORY APPARATUS

Coors Porcelain
Pyrex Glassware
R. & B. Calibrated Ware
Chemical Thermometers
Hydrometers
Sphygmomanometers

—

J. J. Baker & Co., C. P. Chemicals
Stains and Reagents
Standard Solutions

—

• BIOLOGICALS •

Serums — Vaccines
Antitoxins — Media
Bacterins — Pollens

We are completely equipped and solicit your inquiry for these lines as well as for Pharmaceuticals, Chemicals and Supplies, Surgical Instruments and Dressings.

The RUPP & BOWMAN CO.
319 SUPERIOR ST., TOLEDO, OHIO

is concerned with diagnosis and only a relatively small space is delegated to treatment. It would seem that the latter should be given more emphasis in keeping with the practical interest of the authors. This book is very good reading and presents a great deal of most valuable information in condensed form for those who do not desire too much detail.

* * *

TEXTBOOK OF MEDICAL TREATMENT. By various authors; edited by D. M. Dunlop, B.A.(Oxon), M.D., F.R.C.P.(Edin.), Professor of Therapeutics and Clinical Medicine, University of Edinburgh, Physician, Royal Infirmary, Edinburgh; L. S. P. Davidson, B.A.(Camb.), M.D., F.R.C.P.(Edin.), M.R.C.P.(Lond.), Professor of Medicine, University of Edinburgh, Physician, Royal Infirmary, Edinburgh, Formerly Regius Professor of Medicine, University of Aberdeen; J. W. McNee, D.S.O., D.Sc., M.D.(Glas.), F.R.C.P.(Lond.), Physician, H.M., the King in Scotland, Regius Professor of Practice of Medicine, University of Glasgow, Physician, Western Infirmary, Glasgow, Consulting Physician, University College Hospital, London. With a Foreword by A. J. Clark, B.A.(Camb.), M.D., D.P.H., F.R.C.P.(Lond.), F.R.S., Professor of Materia Medica, University of Edinburgh. A William Wood book. Baltimore: Williams and Wilkins Company, 1939.

In reading the usual works on the practice of medicine, who has not felt the inadequacy of the section or perhaps only a paragraph on Treatment? Dunlop's Textbook on Medical Treatment was written to supply the field often left when even the best textbooks on medicine have dealt with the subject. Dunlop's work is a product of the experience and erudition of four Scotchmen whose careers entitle them to a hearing. It is a personal work giving specific details on the subject. In nearly twelve hundred pages, the authors have covered the entire field of general medicine (not surgery). Rather than merely drug therapy, their theme has been "The Management of the Case." They have given their frank opinion about the use of various drugs and procedures with a real Caledonian frankness. There is so much of interest in the book that it is difficult without devoting pages to do it justice in the space at the reviewer's disposal. It is one of the most useful as well as one of the most readable works on medicine that, in the reviewer's thirty-five years of medical reading, he has seen. The general practitioner and internist and particularly the younger practitioner will welcome it.

* * *

PRIESTS OF LUCINA, THE STORY OF OBSTETRICS. By Palmer Findley, M.D., F.A.C.S. Illustrated, pages 421. Price $5.00. Boston: Little, Brown and Company, 1939.

Obstetrics is the oldest medical specialty, antedating civilization itself. This work is a distinct contribution to medical history. The first chapter deals with primitive midwifery in which we have described the experiences of prehistoric woman. Then follows an interesting account of obstetrical practices in the Ancient World, Mesopotamia, Egypt, Persia, India, China, and Japan and the ancient Hebrews. There was of course little or no science at this early period. The dawn of science was reserved to be ushered in by the Greeks. Soranus of Ephesus, the first and second centuries A. D., was considered the great name in obstetrics among the Greeks. He also wrote extensively on the care of the newborn as well as diseases of childhood. He was also, therefore, the first pediatrician. Six centuries before Soranus, however, we have mention of obstetrics in the Hippocratic writings along with other accounts of Greek medicine and Surgery.

While obstetrics is an ancient specialty, the reader is not to infer that it was practiced to the exclusion of medicine and surgery, except by midwives. Far from it. The author has included many well known names, Galen, Paré, William Harvey, the Chamber-

lens, Smellie, William Hunter, Semmelweis, as well as many other Europeans and Americans. The work is divided into two parts, the first of 280 pages deals in a very interesting way with personalities; the second part, 104 pages, discusses what he calls a history of special phases of obstetrics, including Anatomy, the Forceps, the Midwife, Puerperal Fever and the Cesarean operation. There is a broad field for this book. No one can know his specialty with any degree of completeness until he knows its history. This is true not only of the obstetrician and gynecologist who limit their work, it is also applicable to the general practitioner who includes obstetrics in his practice. It is written in a most entertaining way, showing a wide knowledge of medical history on the part of the author.

* * *

MANUAL OF THE DISEASES OF THE EYE FOR STUDENTS AND GENERAL PRACTITIONERS. By Charles H. May, M.D., Consulting Ophthalmologist to Bellevue, Mt. Sinai and French Hospitals, New York. Sixteenth Edition, revised, with the assistance of Charles A. Perera, M.D., Instructor in Ophthalmology, College of Physicians and Surgeons, Medical Department of Columbia University, New York, with 387 illustrations including 31 plates, with ninety-five colored figures, 500 pages. Price $4.00. Baltimore: William Wood and Company, 1939.

The first edition of this work appeared in 1900. There are very few medical textbooks that have been so long known to and received so favorably by the medical profession. The universality of favor in which the book has been received may be seen by the fact that since its first appearance there have been eight British, nine Spanish, six French, six Italian, six Dutch, two German, two Japanese, three Chinese and one Portuguese edition. May's Manual comes as near perfection as a textbook as the reviewer can conceive. It treats for the most part of the established facts in diagnosis and treatment of pathological conditions of the eye; the author has not only written clearly and concisely, but he has made the best possible use of illustration. The publishers have coöperated with a craftsmanship that is worthy of the author's efforts. The sixteenth edition has been thoroughly revised with the chapters on Glaucoma, Lens, Retina, Optic Nerve and Errors in Refraction entirely rewritten. The work will continuue to be popular particularly with the general practitioner and as a textbook for the undergraduate.

* * *

FUNCTIONAL DISORDERS OF THE FOOT, THEIR DIAGNOSIS AND TREATMENT. By Frank D. Dickson, M.D., F.A.C.S., Orthopedic Surgeon, St. Luke's, Kansas City General and Wheatley Hospitals, Kansas City, Missouri; and Rex L. Dively, A.B., M.D., F.A.C.S., Orthopedic Surgeon, Kansas City General Hospital; 202 illustrations. Price $5.00. Philadelphia: The J. B. Lippincott Company, 1939.

This is an interesting as well as useful book. The painful foot, like the proverbial sore thumb, we cannot forget. The authors are correct in their assertion that the correction of foot disorders has been largely left to non-professional persons. So universal is foot trouble that it should engage the serious attention of the medical profession. The reviewer sees how this is not such an easy matter, since the intelligent coöperation of the patient is necessary for successful treatment. After chapters on the anatomy and physiology of the foot, the authors discuss such subjects as primary causes of foot imbalance, the foot of childhood, of adolescence, of adult life, foot apparel, affections of the nails, skin, tarsal and metatarsal bones, the heel, constitutional diseases which may affect the feet, and finally treatment under the headings of foot strapping and foot exercise. By illustration and clear description, the authors have succeeded in presenting to the profession a useful book on a very important subject.

Cook County
Graduate School of Medicine
(In affiliation with COOK COUNTY HOSPITAL)
Incorporated not for profit
ANNOUNCES CONTINUOUS COURSES

MEDICINE—Personal One Month Course in Electrocardiography and Heart Disease every month, except December. Intensive Personal Courses in other subjects.
SURGERY—Two Weeks' Intensive Course in Surgical Technique with practice on living tissue every two weeks. General Courses One, Two, Three and Six Months; Clinical Course; Special Courses. Personal One Week Course Thyroid Surgery, October 23rd.
GYNECOLOGY—Clinical and Diagnostic Courses starting every week. One Week Personal Course Vaginal Approach to Pelvic Surgery, November 6th.
OBSTETRICS—Two Weeks' Intensive Course, October 23rd. Informal Course every week.
FRACTURES AND TRAUMATIC SURGERY—Informal Course every week.
OTOLARYNGOLOGY—Two Weeks' Intensive Course starting April 8th, 1940. Informal Course every week.
OPHTHALMOLOGY—Two Weeks' Intensive Course starting April 22nd, 1940. Informal Course every week.
CYSTOSCOPY—Ten-day Practical Course rotary every two weeks. One Month and Two Weeks' Courses Urology every two weeks.
ROENTGENOLOGY—Special Courses X-Ray Interpretation, Flouroscopy, Deep X-Ray Therapy starting every week.
GENERAL, INTENSIVE AND SPECIAL COURSES IN ALL BRANCHES OF MEDICINE, SURGERY AND THE SPECIALTIES EVERY WEEK.

TEACHING FACULTY—Attending Staff of Cook County Hospital

Address:
Registrar, 427 South Honore Street, Chicago, Ill.

PROFESSIONAL PROTECTION

SINCE 1899 SPECIALIZED SERVICE

A DOCTOR SAYS:

"In this one instance I have been more than repaid for maintaining the protection from your company throughout the twenty years I have been in practice."

THE MEDICAL PROTECTIVE COMPANY
OF FORT WAYNE, INDIANA
WHEATON, ILLINOIS

CHICAGO TUMOR INSTITUTE

21 WEST ELM ST.
PHONE DEL. 6600

SCIENTIFIC COMMITTEE

Max Cutler, M.D., Chairman — **Arthur H. Compton, Ph.D.**
Sir G. Lenthal Cheatle, F.R.C.S. — **Ludvig Hektoen, M.D.**
Henri Coutard, M.D.

The Chicago Tumor Institute offers consultation service to physicians and radiation facilities to patients suffering from neoplastic diseases. Graduate instruction in radio-therapy is offered to qualified physicians.

The Radiation Equipment Includes:

One 220 k.v. x-ray apparatus
One 400 k.v. x-ray apparatus
One 500 k.v. x-ray apparatus
One 10 gram radium bomb

SURGICAL ANATOMY: By C. Latimer Callander, A.B., M.D., F.A.C.S., Associate Clinical Professor of Surgery and Topographic Anatomy, University of California Medical School; Member of Founders' Group of the American Board of Surgery; Member of American Association for Traumatic Surgery; Associate Visiting Surgeon to the San Francisco Hospital. 858 pp. 819 ill. 2nd ed., entirely reset. W. B. Saunders Co., 1939.

When the first edition of Callander's book appeared in 1933 as a clear, well illustrated, one-volume work on surgical anatomy, its publication was welcomed in these columns as a valuable addition to the surgeon's library. The new edition has been completely revised to provide a more compact and concise treatment. Two hundred fifty pages have been eliminated, and this has been possible largely through the deletion of a number of less pertinent illustrations. One hundred new illustrations, however, have been added, and the text is now in closer line with current surgical practices. The material covered is well balanced; twenty-five to fifty pages deal with the perineum and with the vertebral column and spinal cord; fifty to a hundred page sections deal with the thorax, neck and pelvis; and the head, abdomen and each of the extremities are treated in sections of one hundred to one hundred fifty pages. The book is well indexed. Illustrations are exceptionally well selected and are clear and artistically executed. As a still more practical work than its predecessor, the new edition of Callander's book should have considerable appeal both as a reference and as a textbook.

* * *

A TEXTBOOK OF HISTOLOGY, FUNCTIONAL SIGNIFICANCE OF CELLS AND INTERCELLULAR SUBSTANCES. By E. V. Cowdry, Professor of Cytology, in the School of Medicine, Washington University, St. Louis, Mo. 2nd ed., thoroughly revised. 600 pp. 323 ill., some in color. Lea & Febiger, Phila.

Modern histology is a wider science than it was several decades ago. It deals with the integration of structure and function to a greater extent and has acquired greater significance in regard to physiological, pathological and medical problems. The newer aspects have often received a minor position in textbooks. Too frequently, the medical student leaves the histology classroom with little more than a group of spot characteristics for the identification of fixed and stained tissues. The emphasis provided by Cowdry's book is an almost certain corrective for this tendency, for histology is presented as a dynamic field. Body fluids and blood are dealt with first, and the functions of the fluid system and their cellular constituents are emphasized. The protective mechanisms of the body and the spleen follow. The endocrine organs are considered largely from the standpoint of chemical integration and in their relation to the blood stream. The various organ systems are then treated with emphasis on the mechanisms involved in the intake of nutriment, in the consumption of oxygen and the elimination of carbon dioxide, in the removal of waste and in the integration of response by means of the nervous system. The connective tissues and muscular systems, which ordinarily form introductory chapters in histology texts, are treated next, and the reproductive system and skin complete the chapters.

More than other texts, Cowdry's book emphasizes functional mechanisms, but structure is by no means slighted. The text has been rewritten to a large extent in this second edition, and is well suited to classroom use.

The Mary E. Pogue School

for exceptional children

Individual instruction for backward and problem children of any age. Separate building for boys. Epileptics accepted. G. H. Marquardt, medical director. W. H. Holmes, consultant. Gerard N. Krost, Pediatrician.

WHEATON, ILLINOIS

Phone—Wheaton 66 **50 Geneva Rd.**

ALWAYS DEPENDABLE PRODUCTS

Pharmaceuticals . . . Tablets, Lozenges, Ampoules, Capsules, Ointments, etc. Guaranteed reliable potency. Our products are laboratory controlled.

Zemmer

PRESCRIBE OR DISPENSE ZEMMER

Write for catalog.

Chemists to the Medical Profession

THE ZEMMER COMPANY
Oakland Station, PITTSBURGH, PA.

MIC 10-39